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The Journal of the Fire Protection Profession

SEPTEMBER 2, 1931

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● We still see some perfectly good businesses, feebly waiting until strong competitive effort develops and pulls the props from under them before awakening to the important part that advertising plays in the building of sales and good-will.

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The Publishers

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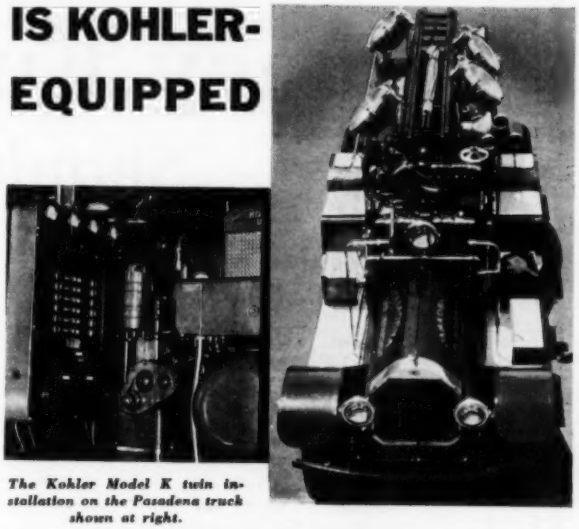

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(A Consolidation of FIRE AND WATER ENGINEERING and THE FIRE ENGINEER)

The Journal of the Fire Protection Profession

VOLUME LXXXIV SEPTEMBER 2, 1931 NUMBER 18

The I. A. F. C. Educational Program

Association Assumes Lead in Firemanic Education—The Proposed Course—Training of Veterans Made Available to All

By CHIEF RICHARD LEE SMITH, Fire Department, Pittsburgh, Pa.

The following paper presents in a practical and understandable way the objects which the International Association of Fire Chiefs expects to accomplish through its proposed program of education. The author also shows how the associatoin is, more than any other, best fitted to undertake this educational work:

Chief Richard L. Smith

SOME years ago the leaders of firemanic thought in this country saw the need of some sort of school or educational course for firemen and the New York Fire Department, under the able leadership of Chief John Kenlon, was the first to institute such a course.

To Chiefs who have a service record of over fifteen or twenty years, it is readily seen and acknowledged that great strides have been made since that time in the profession of fire-fighting. In fact, I maintain that the efficient, up to date Fire Department has kept abreast of the times and met the manifold problems confronting it: Those brought about by modern manufacturing conditions, the vast use and storage of volatile oils and flammable materials, housing of large numbers of people in excessively high buildings and huge buildings containing merchandise of all kinds, creating hazards unknown to the old-time fireman.

Yet, our being able to cope with these conditions did not just happen like "Topsy," but has been due in a great measure to, not alone the experience of our older officers, but to certain educational methods extended, even though in a haphazard but well meant manner, to our younger executives.

Old Methods Give Way to New

We all admit that the old time hit and miss method of meeting our responsibilities to the citizens of our various cities is a thing of the past and it is amazing when we stop to think of the difference in those responsibilities now in comparison with those of the past, in our becoming more proficient in the old time duties and in numerous new duties assumed by us as part of our work in rendering service to our people.

Primarily, fire departments were organized to combat and extinguish fires. If they worked fairly well, that, for years, was all that was expected of them in their communities, until the mounting fire losses year after year and the loss of life became so great that different national and international organizations began to devise ways and means to curb this appalling loss to life and property and to reduce it if possible and, although a splendid foundation was laid by these organizations in a campaign of education over a period of years, the results were rather disheartening and the losses continued to mount until, at the Convention of the International Association of Fire Chiefs at New Orleans in 1926, a program was proposed and adopted that a concerted drive of year around Fire Prevention be instituted under the supervision of the Chiefs of the Fire Departments of the country and I am happy to say that the following year showed a reduction of over $80,000,000 in the fire losses and a corresponding reduction in loss of life.

I. A. F. C. Assumes Lead in Education

As a result of this, our association felt it was on the right track in that it was the proper organization to handle these matters in assuming the lead, due to our close personal contact with our people, our standing in our communities and the first hand knowledge we all should have to cope with these conditions and carry out a complete course of instruction pertaining to our business; in other words "Professionalize the Fire Service."

As has been noted before, our duties as executives of Fire Departments demand a knowledge of not alone improving on old time methods of Fire extinguishment, but rather those of Fire Prevention, Salvage Work, etc. In fact, we claim our "job" has surely entered the realm of the professions when we realize the different subjects upon which we must have some knowledge, namely:—Chemistry, Building Construction, Arson and laws pertaining thereto, Potential and Probability Hazards, Explosives and Inflammables, Refrigeration, Ventilation, Hydraulics and other subjects too numerous to mention.

The I. A. F. C. has already under way a program for

> "In putting this Educational Program over, the association is making it possible for all our firemen, by application and study at these courses, to avail themselves of not alone the knowledge but the experience of the best firemanic thought in America today, thereby gaining in a short space of time what took older officers a lifetime to learn."

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the members of the Fire Service, which we fully and logically believe will reduce the loss to both life and property, incidental to fires in our country. The curriculum, when finished, will include practically every activity connected with our service and over thirty subjects will be treated in this course and will be made available to members of Fire Departments through co-operation with the Vocational Education Department, Washington, D. C., and also with state and local Fire Department organizations, through distribution and use of picture films depicting various subjects of the course of instruction at firemanic meetings of all kinds and through distribution of edited and authorized printed booklets covering all the topics of our course.

In answer to certain inquiries regarding our association doing this work rather than other agencies that have in some ways tried to put this work over, I might say no one is more sincerely or more personally interested in this work than us. We have proven our worth and our continued willingness to devote our time and efforts to the end that our public may have a more efficient fire service in all its modern duties and who other than us is better equipped, by our experience, to prepare the necessary educational material needed in our work, and who other than us could or would devote the time and effort necessary for this work?

Training and Experience of Veterans Made Available to All

No doubt should exist in any Fire Chief's mind as to the necessity of this movement if he will consider the following fact: We older officers of Fire Departments, who have had any success as executives, have had to follow the rather bumpy road of "experience" in all that it means to attain that success and there is no doubt that we, as executives, have been peeved many, many times in the actions taken or work performed by subordinate officers, who, although they probably have given the best they knew how and exhibited the proper spirit, yet were woefully lacking in accomplishing proper results, due probably to ignorance, certain training and experience. In putting this Educational Program over, it is making it possible to wipe out that condition existing in any Fire Department in our country, paid or volunteer, in that it is made possible for all our firemen, by application and study at these courses, to avail themselves of not alone the knowledge but the experience of the best firemanic thought in America today, thereby gaining in a short space of time what took we older officers a lifetime to learn.

Raising Chief and His Men in Esteem of Public

One other thought: The program as proposed, in covering the subjects to be taught, will surely impress our citizens with the fact that the technical information required by the trained fireman is on at least a par with the professional man in our communities and one of the most important results of the establishment of these courses will be to raise the Chief and his men in the esteem of the public when they realize the responsibility and requirements resting on the members of their local Fire Department and, under just such circumstances, they will more willingly lend their aid and support to the department's needs and its development. That alone is worth the effort involved, in that it will put the Chief and his men back in their rightful position in thier local community, that of being the most necessary and vital activity under municipal government for, after all, there is no activity that lies closer to the heart and well-being of any well built up American community than its Fire Service, for such communities could not exist for long without that service.

Education Renders Work Easier

This work will not be an added "burden" to our Fire Departments and our members must be made to realize that it is really intended to actually lighten the labor of our duties in a great many ways. In other words, I maintain it is often easier to perform your duties properly, through education, and to do a good job in all respects than it is to do a mediocre job due to ignorance or lack of training and knowledge.

An old Irish professor, a friend of mine who used to come around to our quarters when I was a Captain, had a number of quaint sayings, among which was one I always remembered and it is quite applicable to our present subject. He said, "Education is a burden to no man and is a domn light load to cart around." Correct!

Value of the Program

Let me discuss in just a few words the "value" of the Program from an economic or business standpoint, for after all, the best way to reach the ordinary business man is through his pocket-book and he must be made to realize that although we need his support, he really needs us and our service to a far greater extent and that it is up to him just how efficient that service is to be. I have often said it is a 75-25 proposition with the odds in his favor. If he has fires, big or little, we will put them out, certainly, irrespective of the loss, large or small. But why have so many unnecessary fires? He and all of us have to pay and pay dearly for them. And when fires do occur, let us, by efficient operation, under intelligent direction, be able to keep the losses down to a minimum. That is simply a good business proposition and should appeal to the average business man who can be made to realize just what these mounting number of fires and yearly losses mean to him and his community, incidentally his own business.

We feel and we know these conditions can be remedied to a great extent in this country and we also know nothing worthwhile was ever accomplished without effort. So in behalf of the I. A. F. C., in behalf of the bravest and most unselfish body of men in the world, the Fire Service of our Country, I ask that all support this movement in your local communities, aid your International officers and be like my Irish friend, the professor, who undoubtedly would grab a light load of our educational program, which is indeed no burden.

(From a paper read before the annual convention of the Eastern Association of Fire Chiefs at Atlantic City, N. J.)

Champion Peach Pickers of the Fire Service

The photograph reproduced herewith, furnished through the courtesy of Chief Al. Herring, Murphysboro, Ill., is referred to by him as follows: "When Chief Alt and Master Mechanic A. W. Miers, of the St. Louis Fire Department, drove down to pay me a call, we visited one of our famous peach orchards. Believe it or not, Chief Alt and Miers picked five bushels of peaches in five minutes!" L. to R., A. W. Miers, Chief Herring and Chief Alt.

Egyptian Fire Fighters Meet

New officers were elected at the July meeting of the Egyptian Fire Fighters Association which was held in Centralia, Ill. It constituted the annual meeting of the association. President Albert Herring refused election, for he has held that office since the organization was formed in 1925.

The new officers are Ed Archbold, Centralia, President; Fred P. Haderline, Carlyle, First Vice-President; Walter Finkelin, Belleville, Second Vice-President; O. C. Forsman, Flora, Secretary; Peter Lind, Cairo, Treasurer. The Executive Board consists of Chief Albert Herring, Murphysboro, Chairman and E. D. Yeck of Flora, Harry Cash of Marion, H. O. Deabler of Xenia, Carl Crain of Carbondale and Ernest Glenn of Rosiclaire.

The next meeting will be held in Columbia.

Vinton, Ia., Raising Funds—Funds are being raised in Vinton, Ia., for the purchase of apparatus for the protection of rural property.

Fireman Wins Compensation for "Duty" Injuries—Here is a new type of claim. A fireman of Portland, Ore., sprained his ankle while taking a bath after a handball game. He petitioned for compensation and the board decided to grant half pay for 13½ days.

Governmental Duties of Municipal Fire Department Officials

Cases in Which Such Officials Are Acting in a Governmental Capacity, Rendering the City Not Liable—Instances Cited

By LEO T. PARKER, Attorney-at-Law

THE rule is firmly established that where a municipal corporation is performing a duty imposed upon it as the agent of the state in the exercise of strictly governmental functions, there is no liability to private action on account of injuries resulting from the negligent acts of officers or agents thereunder, unless the liability is definitely fixed by statute.

A governmental duty is one involving the exercise of governmental power, and is assumed for the exclusive benefit of the public. A sovereign act of government cannot be submitted to the judgment of the Courts, since government is not the subject of private law. It rests upon the municipality to determine whether it will exercise its governmental powers, and, if it does, such functions do not create civil causes of action. Obviously, if a city elects to engage in a business in the nature of a private undertaking such as street cleaning, operating gas, electric or water plants, conducting places of amusement, as public parks and theatres, or operating transportation vehicles, it will be liable to the same extent as a private individual or firm.

On the other hand, it is important to know that conduction of Fire and Police Departments are deemed governmental duties for which the municipality is not liable although injuries to persons or property are negligently or otherwise effected.

"A governmental duty is one involving the exercise of governmental power, and is assumed for the exclusive benefit of the public. A sovereign act of government cannot be submitted to the judgment of the Courts, since government is not the subject of private law. It rests with the municipality to determine whether it will exercise its governmental powers, and, if it does, such functions do not create civil causes of action. The conduction of Fire Departments are deemed governmental duties for which the municipality is not liable, although injuries to persons or property are negligently or otherwise effected."

For these reasons of the law City Councils, officials, and employes of municipal Fire Departments, when acting within the scope of their employment, have wide discretion in performance of their duties, establishing rules and regulations, granting or refusing permits, and the like, without likelihood of subjecting themselves or the city to legal liability.

Fire Marshal May Grant or Revoke Permit

Generally speaking, the Courts will interpret a state statute or city ordinance in due consideration of the intended meaning of the law-making body which formulated it. Moreover, the Courts will endeavor to uphold decisions and orders issued by Fire Marshals intended to reduce fire hazards. This is true because governmental duties of this nature are beneficial and in fact indispensible to the general public.

For instance, in Standard Oil Company vs. Commissioner of Public Safety, 174 N. E. 213, it was disclosed that a state law provides that the municipal Fire Marshal shall hear and determine all appeals from acts and decisions of those acting under his authority and make all necessary and proper orders thereon. "Any person aggrieved by any such action of the head of a Fire Department or other person may appeal to the marshal."

The Fire Marshal delegated authority to the Street Commissioners to grant licenses and permits for conduction of businesses. It granted a license and permit to a company to store 2,056,320 gallons of petroleum products, exclusive of gasoline and naptha, in a vertical steel tank. An owner of property located 1,424 feet from the proposed tank appealed to the Fire Marshal on the grounds that storage of the inflammable products would be greatly hazardous to his property. The Fire Marshal issued an order revoking the license and the company appealed to the Commissioner of Public Safety, who approved the order of the Fire Marshal and revoked the license.

The company appealed to the higher Court for reversal of the decisions on the contention that the property owner was not aggrieved within the meaning of the statute and, also, that the Fire Marshal was not authorized to reverse a decision rendered by a Commissioner that he had appointed. However, it is interesting to observe that the higher Court upheld the Fire Marshal's final verdict, and said:

"The plaintiff (company) contends that Niland (property owner) is not a 'person aggrieved' within the meaning of the statute. As the Fire Marshal acted on Niland's appeal and ordered the revocation of the license, his action 'imports a finding of all facts necessary to sustain it which could not be found by him from the evidence and from these other sources of information' . . . The Fire Marshal is presumed to have acted honestly and fairly . . . His order, therefore, revoking the license granted by the Street Commissioners was proper unless, as matter of law, a tank capable of holding over two millions of petroleum products could not adversely affect property situated at a distance of 1,424 feet. There is no evidence before us to show that the property would not be adversely affected."

Building Ordinance Held Effective

The Courts have consistently held that property owners are bound by city ordinances which prohibit, regulate or restrict construction of buildings within a specified district, unless the building is under construction before passage of the ordinance.

For example, in City of University Park vs. Rahl, 36 S. W. (2d) 1075, it was disclosed that a city enacted an ordinance which prohibited the construction of certain types of buildings within a specified section, unless permits were obtained from the municipal building inspector.

After passage of this law a property owner endeavored to obtain a permit, but the inspector refused to grant the same. The property owner filed suit on the grounds that, before passage of the ordinance, he had purchased the lot for the purpose of constructing the building. Notwithstanding this argument, the higher Court held the owner not entitled to construct the building, and said:

"He (property owner) had the right on such date to construct the building without a permit from appellant, however this right was subject to appellant's power to enact in the future a valid building ordinance that would require a permit for the construction of the building. Appellee (property owner) did not assert this right by beginning the construction of the building before the enactment of a valid building ordinance requiring a permit, nor before the enactment of a valid zoning ordinance that prohibited appellant (city official) from issuing a permit for such a building."

When Zoning Ordinance is Invalid

The power of municipalities to enact zoning ordinances has been the subject of considerable discussion in recent years, resulting in conflicting decisions in various jurisdictions, due mainly to the difference in constitutional provisions, under which several statutes were enacted. The general tendency of the Courts has been toward a liberal construction of legislation conferring power to create zoning ordinances, in recognition of the changing needs of munici-

palities, due to growth and development, and to sustain such ordinances as a proper exercise of police power, where such can be done without arbitrarily infringing on the rights of individuals.

However, inasmuch as the natural effect of ordinances of this nature is to limit private rights in the interest of the public welfare, the exercise of the power must be carefully guarded and permitted only in cases where the conditions and circumstances are such as to show the effect of the ordinance to be a reasonable and proper exercise of police power. An example of an ordinance inapplicable to the situation is found in the late case of State vs. MacDuff, 297 Pac. 733.

The facts of this case are that a municipality enacted an ordinance which prohibited construction of certain kinds of buildings within a prescribed zone. Located within this district was a lumber plant whose buildings burned down after the ordinance was passed. The city officials refused to issue a permit for rebuilding of the lumber company's plant on the contention that it would be a fire hazard.

The lumber company filed suit to compel issuance of the permit on the grounds that it had established its business many years before the law was passed and, further, that continued operation of its plant would not be an extraordinary fire hazard for the reason that the buildings would house no machinery to produce noise, dust or shavings, and would contain no burner or furnace to emit smoke or cinders.

In view of this testimony, although the city officials refused to issue the permit, the higher Court reversed the decision, and said:

"The location and operation of lumber yards within the municipal limits may be a subject of municipal regulation. Where, however, the effect of a zoning ordinance is to destroy or prohibit the continuance of an established and otherwise lawful business, the ordinance as applied to the property of the objecting owner will not be upheld unless the Court can see that it will tend to promote the public health, morals, safety, or welfare. . . . The main argument presented by respondent (city) in the instant case is that of an alleged fire hazard, and this argument becomes unconvincing when the circumstancees of the neighborhood, the arrangements on the appellant's property . . . are considered."

Oil Well Drilling Operation Held Fire Hazard

It is well established law that a municipality may enact a valid and enforceable law intended to regulate property for the purpose of reducing fire hazards. Moreover, it is immaterial that a law of this nature, which is reasonable and non-discriminatory, actually results in great loss of profits to certain property owners.

For illustration, in the late case of Marblehead Company vs. City of Los Angeles, 47 F. (2d) 528, it was shown that

(*Continued on page* 658)

Connecticut Firemen Meet

At its forty-eighth annual convention, Deputy Chief William H. Daley of the Hartford, Conn., Fire Department, was unanimously elected president of the Connecticut State Firemen's Association. The convention was held on August 21 and 22 at the Cameo Theatre, West Haven, Conn. Chief Daley succeeds Michael J. Whalen, of Hamden. Other officers elected were as follows: Vice-President, Thomas C. Bracken of Branford; Secretary, David W. Harford, South Norwalk; Treasurer, Michael T. Souney of New Britain and Chaplain, Rev. Michael J. Thompson of Willimantic. The only contest was in the selection of Treasurer which was won by Souney by a vote of 257 to 77 over Lieutenant Michael Flaherty of Waterbury.

Deputy Chief William H. Daley,
Hartford, Conn., Pres. C.S.F.A.

County Vice-Presidents were elected as follows: Fairfield County, Joseph J. Dean of Bridgeport; Middlesex County, A. J. Foley of Portland; Litchfield County, J. H. Griffin of Norfolk; Windham County, Frank Dumas of Putnam; Hartford County, W. J. Beattie of West Hartford; New Haven County, Andrew F. Healey of Milford; Tolland County, George B. Milne of Rockville; New London County, Joseph Merckele of Mystic.

The convention opened on the first day with an address of welcome by First Selectman John W. Curren of West Haven. Memorial services were conducted by Retiring President Whalen in the absence of Chaplain Thompson. Due to the present industrial depression it was voted not to hold any field day or parade in connection with the convention.

Secretary Harford, in his report to the convention said that during the year the demand on the general state fund has been the greatest within the history of the organization in number of claims presented and the amount of money required. 288 claims were honored, involving the sum of $23,316.40, an increase of $4,169 over last year.

The expenditures during the year to transact the business of the Association were $3,549.53, leaving a balance of $17,329.11. Nine new companies were admitted to membership in the Association during the year.

The Chief's Club, composed of past and present fire department chiefs throughout the state, held its annual meeting in conjunction with the firemen's convention and elected the following officers for the year: President, Rufus R. Fancher of New Haven; First Vice-President, David W. Harford of South Norwalk; Second Vice-President, Daniel E. Johnson of Bridgeport; Secretary-Treasurer, D. B. Mercer of New Haven; Chaplain, Rev. M. J. Thompson of Willimantic. Resolutions were passed on the deaths of Ex-Chief Charles H. Rose of New London, Ex-Chief E. A. Conway of East Portchester and Ex-Chief William F.. Clark of Naugatuck who died since the last club session. The Executive Committee will meet early in 1932 to select the city for the next convention.

THOMAS F. MAGNER.

Improvements Urged for Dayton

The construction of new fire stations, the purchase of considerable fire apparatus and equipment, and the erection of a training tower and repair shop are some of the major recommendations made by the Fire Prevention Committee of the Dayton Chamber of Commerce for improving the Dayton, Ohio, Fire Department. Specifically the report recommended:

A training tower and repair shop to be centrally located. The present shop at Engine House No. 16 to be abandoned.

Every piece of apparatus in the down town high value district should be manned by six to eight men, and the apparatus in outlying districts should be manned by not less than five men.

A life-saving squad of from ten to twelve men should be organized to meet any emergency.

Replacement of three or four down town houses by new modern stations.

A unit carrying floodlights for fighting night fires should be established for additional protection.

A high pressure wagon, with two deck turrets and a tower should be purchased.

Two properly manned double companies are needed to service temporarily newly annexed territory. A new 85-foot aerial ladder to be purchased.

Besides these, the committee recommended a number of other improvements as the establishment of a depreciation fund and a change in arson laws.

Firemen Raise Chickens Between Alarms

Like all firemen, those at the Central Station, Greensboro, N. C., occasionally have a little spare time between fires.

So they decided to turn that time into money and went into the poultry business. The decision was not hasty, for a few of the firemen have been raising chickens between fires for many years. Utilizing part of a room back of the big station house, ten enterprising firemen now have more than two hundred baby chicks and ducklings of varying sizes. But this is only a small part of the lot, for the fanciers maintain pens of ducks and chickens at their homes and in all they own a large number of birds.

D. G. SPENCER, JR.

Eldorado, Ia., May Control Fireworks Sale—Eldorado, Ia., is considering an ordinance which would prohibit the discharge, firing or use of firecrackers and other appliances using chlorate or potash mixtures. The ordinance would prohibit the retail sale of fireworks.

The Volunteer Fire Department

By N. N. WOLPERT,
Assistant Editor, FIRE ENGINEERING

A Series of Articles on Volunteer Fire Department Administration and Operation.

This article, the eighth of a series, deals with the need for order and system when the Volunteer Fire Department is fighting a fire and the importance of each man knowing his duties. The avoidance of damage is emphasized, including the use of small streams and fire extinguishers on incipient fires. If you are enjoying this series, or know some way in which it may be improved, won't you please write this department?

VOLUNTEER firemen are an ambitious group organized to perform some civic duty—either to fight fires or to make the community a better place in which to live. In their anxiety to fight fires with the least possible exertion, they forget that organized effort brings forth the greatest results. For this disorganization, they are often ridiculed by the sidewalk chiefs.

Only one who has lived in a small town and has experienced the thrill of running to fires after the siren has operated can appreciate just how much disorder can take place when the fire company arrives at the scene.

The trouble seems more or less general. Perhaps the confusion starts when a crowd of men assemble and each one desires to rush as fast as he can to the seat of the fire. Perhaps the characteristic of the individual becomes paramount, and he does the thing he likes best to do. Perhaps the Chief does not give the proper orders. Regardless of the reason, the company does not operate as efficiently as it should.

Let me describe what often takes place when a company arrives. Each fireman jumps off the apparatus and aside from the few who assist in laying hose, the others grab whatever fire appliance is handy. It may be an axe, an extinguisher, a crowbar, or any other movable tool. The men then rush to the fire, survey the extent of the blaze, and realize that they have the wrong tool. There is a rush back to the apparatus. But the one who has a crowbar and wants to exchange it for an extinguisher, discovers that the extinguishers are all gone and that he must take some other tool. He must take something. How will he appear before the large crowd that has gathered on the grounds, if he rushes around empty handed. So back to the fire he goes with the crowbar, even though he knows he has no use for it.

Another accusation made is that the volunteer firemen destroy more than they save. It has been said that a plasterer who is a member of a volunteer ladder company will use the plaster hook in tearing down the walls, even though it may not be necessary, just so that he will create work for himself in repairing the damages, after the fire has been extinguished. The same reasoning is applied to the other skilled mechanical trades such as the plumber, the electrican or the paperhanger.

Men Must Respect Authority and Obey Orders

Perhaps all that has been written does not apply to your organization. If it does not, consider yourself lucky. If it is a counterpart of your routine, it is time that steps were taken to establish a definite department routine and to make the men realize that regardless of their own personal opinions, they must respect authority and follow orders.

Each man must know what he is going to do before the apparatus rolls up to the fire. Let us say that Jerry or Tom are to have the axe. If both men are present, then the one who is without any definite work to do, must report to his commanding officer for orders, and so on.

If an analysis is made of Fire Department operations, one soon discovers that there are a certain number of standard evolutions. When a company rolls up to a fire, hose must be taken from the rear of the pumper, a line stretched from the pumper to the fire, and connections made for a supply of water. After that is done, the men at the pumper, the hydrant, and the nozzle are to await orders from the Chief. He has to determine, whether in his judgment, the fire should be fought with portable extinguishers with a line from the chemical tanks or with a line from the pumper.

Individual opinion does not count at a fire. It is no time to argue. All the discussions and methods of fire fighting must take place at Fire Department meetings and not outside of the meeting rooms. If the Chief is wrong in his methods, he is held responsible for having exercised poor judgment. No Chief presents the defense that while he admits the procedure was wrong, it was the one suggested by Mike Grenahan or some one else.

A previous article covered the organization of a Fire Department. In it was given the duties of each officer. For example the Captain or Lieutenant is responsible for the men in his company. When the subordinate officer arrives at a fire, he reports to the Chief.

All orders for a particular company are communicated by the Chief to the officer in command of the company. The subordinate officer then designates the various men in his command to carry out the details. It must be remembered that there can only be one Chief at a fire. The men must respect authority.

Hose Lines

When the apparatus is in position on the fire grounds, and the department has directed its attention to the saving of life, the Chief must determine whether the fire is to be fought with large or small sized streams.

The Fire Chief of a former generation believed in drowning everything in sight on the theory that anything that was wet wouldn't burn. Today things are different. Firemen know that the greatest loss at a fire does not occur from the flames but from the damage to the contents of a building by both water and smoke. As a means of lowering the fire loss, firemen try to use water sparingly.

If the fire is in its incipient state, it can be extinguished by emptying the contents of one or more portable extinguishers. Fires in chimneys can be fought with portable extinguishers. If a hose line is used in extinguishing a chimney fire, the first floor would soon be flooded and the rugs would be damaged by a mixture of soot and water.

Where the fire has spread beyond the incipient stage and has involved one or more rooms, then it is doubtful if the portable chemical extinguisher would do much good. A hose stream is necessary. Where the apparatus is provided with a booster or chemical tank, the chemical line hose may be used, unless the fire has broken through the walls. A large percentage of the fires, according to figures published in the various annual reports of Fire Departments, are extinguished with the aid of chemical line streams.

The larger lines of 2½-inch hose and 1½-inch nozzles form dangerous combinations in the hands of inexperienced men. It should be remembered that the average fire stream discharges three hundred gallons of water a minute and that that is a lot of water. In fact a more vivid conception may be obtained of the quantity of water when it is noted that each minute 2,500 pounds of water are discharged through the nozzle. And if several lines are operating at one time, what chance has the parquet floor, or the blue Chinese rug or the antique furniture that Aunt Matilda sent over as an anniversary present.

Large lines should only be used at rapidly spreading fires or where the blaze has reached an advance stage. In operating large lines, the nozzle men must direct the streams at the base of the flames. Considerable of the effectiveness of the streams is lost if the water strikes a ceiling first and then rebounds on to the fire. At a hot fire, a broken up discharge of water vaporizes into steam and exercises little effect in cooling the fire. Water is used in fire fighting to bring down a substance until it is below the temperature where combustion can be supported. Water that reaches the base of a fire has an opportunity to serve as a cooling agent and not as a medium for the generation of steam.

The average nozzle for volunteer Fire Department work

on large lines will seldom be over 1⅛ of 1½-inches in diameter. It is necessary to have several men at a nozzle to prevent the line from becoming unmanageable and dangerous to the large crowd gathered at a fire.

On fires in frame buildings, where the flames have broken through the outside walls, several large size streams are necessary. Such fires are worked from the outside until the intensity of the fire has been reduced and it is possible to bring men inside without assuming an undue amount of personal danger. A Chief is responsible for the safety of his men, and no man should be ordered to a position where it is known that abnormal hazards in fire fighting exist.

When a major size fire has been reduced to the point where the danger is over concerning the advance of flames, a smaller amount of water may be used. This can still be reduced for the wetting down before the fire companies leave for their quarters.

In wetting down the roofs of adjoining buildings, it is not necessary to use heavy streams. Large streams under pressure may tear away shingles and do considerable damage —perhaps just as much as if fire broke out. Only enough pressure should be used to force the water over to the desired point, and instead of having a firm, solid discharge of water, better work can be done by a scattered discharge.

The protection of nearby exposures forms an important part of the work of volunteer firemen. Flying embers may alight on shingle roofs or farm buildings and start new fires, unless some steps have been taken to prevent further outbreaks.

Ventilating at Fires

Where a fire has been burning for some time, a large amount of heated gases is generated. The hot gases, being lighter than air, rise to the top of the building. Further ascension is prevented by the trap door to the attic or by the finished upper ceiling. When the gases can no longer rise and new gases are generated, the heated gases spread out or mushroom. In this way the heated air is forced into closets and crevices. And after flammable material has been raised to the temperatures of the very hot gases, new fires develop. To prevent the spread of fires to the upper floors, it is necessary to free the building of the heated gases. In other words, the firemen must ventilate.

But before that is done, attention must be given to the saving of life. Next comes the laying of hose lines as a means of first line defense. After this has been done, the men may be ordered to ventilate.

In ventilating a building, it is not necessary to chop holes in the roof or break every window.

Recently a comic magazine had a cartoon showing a fireman who was ordered back. He had broken every window but one.

The proper way to ventilate is to make an opening at a point directly over the fire. But often that is impossible. It is not necessary to break windows to ventilate an upper floor. If the window is raised, the same size opening is made for the discharge of the gases as though the glass was shattered. However, if the window is found to be locked, it is necessary to break the glass. If the window is made up of a number of small panes, only one small square need be broken so that the fireman can reach in and release the catch on the window frame.

It is very difficult to attempt to tell firemen where and what they should do in order to permit the hot gases to rise out of the building. However, there is one thought that I desire to emphasize. There is no earthly reason for the large destruction of property when volunteer firemen are working on a building. Why should firemen break expensive plate glass windows to gain entrance to a store when the same goal can be achieved by smashing a smaller glass in the door? Breaking a wooden panel near a lock will enable one to open the door from the inside. Why suddenly become obsessed with the thought that it is mandatory to smash the whole door?

Fire Departments are organized for the saving of life and property.

Unless the men are trained to respect constituted authority, are trained in Fire Department evolutions so that confusion and disorder will be eliminated, the department will result solely in some kind of social or political organization, and not a group banded together for the two fundamental principles mentioned.

Oil Gusher Fire Results in Five Deaths

Five persons were killed and a number of others were seriously injured when a wild oil gusher at Mount Pleasant, Mich., exploded and scattered flaming oil over several hundred persons who were gathered to see the blowing-in process. It is believed that the explosion was caused by a lighted cigarette that was carelessly dropped by one of the crowd. This is a photograph of the well after many attempts had been made to cap it.

"John J. Harvey" Name of N. Y. Fireboat

"John J. Harvey" will be the name of New York City's new fireboat now in course of construction at the Todd Shipbuilding plant at Tebo's Basin in South Brooklyn, according to a letter transmitted by Fire Commissioner John J. Dorman to William H. Todd, the shipbuilder. The designation is necessary at this time in order to make certain metallic castings bearing the name. The boat will be launched late in September.

It is the first time in the history of the New York Fire Department that a fireboat will bear the name of a man from the ranks—a blueshirt. John J. Harvey was a Pilot for ten years on the fireboat Thomas Willett. While helping his comrades on deck at the fire in the cargo of the North German Lloyd steamer "Muenchen" on February 11, 1930, an explosion in the "Muenchen" tore open the steamship's hull and blew Pilot Harvey into the Hudson River at the foot of Morton street. He was drowned and when his body was recovered it was found that he suffered a fractured skull as well. The fireboat was seriously damaged and other members of her crew were injured and blown overboard.

In honoring the memory of Pilot Harvey, Commissioner Dorman pointed out that Harvey had a splendid record of twenty-four years of service as a fire fighter, the latter ten of which he served as Pilot of fireboats. His name appears twice on the roll of merit for exceptional service.

Harvey was a resident of Greenwich Village and was a boyhood chum of Deputy Fire Commissioner Joseph M. Hannon and Mayor James J. Walker.

Heretofore, fireboats have been named for Mayors of New York and some of them for the old Burgomasters of New Amsterdam. The "Thomas Willett," the fireboat on which Harvey sacrificed his life, was named for a man who was Mayor of this city in 1665, which was 200 years before the present Fire Department was even organized.

For the past several years, feeling in the Fire Department has leaned toward a departure from the practice of naming fire tugs for those outside the realm of fire fighting service. In naming the new fireboat for a fire fighter from the ranks, Commissioner Dorman is carrying out the wishes of Mayor James J. Walker, who is known to be opposed to honoring living public officials. Three years ago, the names of living persons were removed from some of the ferryboats plying between Staten Island and Manhattan.

WM. JEROME DALY.

Chickasha, Okla., Assistant Chief Dead

Assistant Chief M. A. Chestnut of Chickasha, Okla. died Saturday, August 1. His demise was particularly shocking to his fellow co-workers in the Oklahoma Firemen's Training School. "Mike," as all had come to know him, was Instructor of the Chickasha Fire Department and had attended the second Quarterly Training School in Tulsa. It was while there that an infection started which later caused his death. Although Mike had been intimately known to most of the members but a short time, his worth richly merited the respect and admiration of all, as was attested by the fact that about thirty-five firemen from other cities of the state attended his funeral.

Fairhaven, Mass., May Purchase Apparatus—Fairhaven, Mass., is considering the purchase of fire appaartus.

THE ROUND TABLE

For Practical Discussion of Current Fire Department and Fire Management Problems

CONTRARY to the impression that appears to have been created by fiction writers, each fire run does not mean that long, snaky lines of hose are charged and immediately placed in operation. Often it is only necessary to take off a few of the portable extinguishers from the apparatus, and to empty the liquid on the small fire. Fire Department statistics show that a large number of fires are extinguished in this manner.

This gives rise to the problem of how many portable extinguishers should be carried on fire apparatus. And while on the subject, it is necessary to consider the phase of recharging soda and acid extinguishers.

Many homes today have small extinguishers in the kitchen as the result of missionary work on the part of Fire Chiefs. In a number of towns, the Fire Department is the only logical place to bring the units when it is necessary to recharge them. Then again, unless the resident is made to realize that yearly inspections of extinguishers is necessary, he may have a practically worthless fire fighting instrument occupying space in his home.

In the box on this page is the question that is discussed in this issue. In the box on the following page is the problem that will be treated in the next issue. Should you have some comments that you would like to add to the next discussion, you are invited to write to the "Round Table Editor," FIRE ENGINEERING, 24 W. 40th Street, New York, N. Y.

HERE IS THE QUESTION

What type and how many portable extinguishers do you believe should be carried on a pumper? On a ladder truck?

What suggestions have you for improving the effectiveness of portable extinguishers?

Do you believe that the Fire Department should service small size extinguishers in homes? What experience have you had in this work?

Discussion of the Question

It appears to be the general practice for Fire Departments to recharge soda and acid type fire extinguishers for residents. For other types such as carbon tetrachloride or foam, a nominal charge is made to cover the cost of the material used. One department even polishes the extinguisher and services it before it is returned to its owner. Some Chiefs object to recharging the units on the ground that the work could be handled by some commercial organization. The replies that have been received follow:

Lawrence E. Reif, Chief, New Haven, Conn.: We carry soda and acid as well as Foamite extinguishers on all hose wagons, pumpers and ladder trucks. All engine companies in the central district and a few companies outside of this district have carbon dioxide extinguishers. The number of extinguishers to be carried on each apparatus and type of same, I believe, depends on local conditions. I would say that you can't have too many extinguishers on a piece of apparatus if space permits mounting them.

The only suggestion I have for improving the effectiveness of an extinguisher is to see that it is recharged regularly, that a washer is in the head cap, that the hose is in good condition, and that the proper direction of stream is used.

We are called upon quite frequently to recharge extinguishers and until recently we recharged them if used on an actual fire. But with the entrance of the foam, CO_2 gas and carbon tetrachloride extinguishers, we had to call a halt. We maintain that the party using these extinguishers gets a better insurance rate for having this added protection. We therefore refer them to several concerns in our town who make their living by recharging the various types of extinguishers. We do, however, recharge extinguishers for all City Departments when requested to do so.

Albert Herring, Chief, Murphysboro, Ill.: I have found that two soda and acid, one foam and one water hand pump extinguisher give us the best service. We use the type of extinguisher best suited to the type of fire to be fought.

Improvement should be made in the handle of the extinguisher, I believe. A type of handle should be designed which will do for ground work as well as enable it to be carried up ladders.

We service every extinguisher which is placed in private homes, theatres, schools and hospitals. Once a year we gather up all extinguishers in a truck, re-fill and polish them and return them. We also instruct persons in the home, as well as hospitals and moving picture show houses in their use. This fall we are arranging with the Boy Scouts to take part in this work.

Geo. M. Kellogg, Chief, Sioux City, Iowa: I think that two 2½-gallon portable extinguishers should be carried on all pieces of fire apparatus. We carry two on all our apparatus.

I have no suggestions to make on improving the effectiveness of portable extinguishers, only that care should always be taken to see that they are in perfect working condition.

I do not believe that Fire Departments should service small extinguishers used in homes. We have done it when it could not have been done elsewhere. I believe that arrangements should be made with some individual or firm to do this type of work. The Fire Department should then direct those that want extinguishers serviced, when it can be done. This is the method we use in our department.

John L. Casey, Abington, Mass.: In this town each piece of apparatus is equipped with one soda and acid, one foam type 2½-gallon extinguisher, and one carbon tetrachloride extinguisher.

I could suggest no improvement in the portable extinguisher other than to keep it in proper working condition such as replacing parts that show the result of service and to keep them properly charged.

We service soda and acid extinguishers for the private homes, schools and churches. No charge is made to the owners for this service.

In manufacturing plants this work is taken care of by recharging service men once a year. If the extinguisher was used on a fire or was accidentally discharged, we recharge it without cost to the owner.

In schools and churches one of the permanent men is detailed to this work. The extinguishers are recharged each year. In the case of the private homes, residents bring the extinguisher to the fire station. A record is kept of this work and if the owner fails to have it recharged at the proper time we notify him that it should be recharged at once.

I believe we have been many times repaid for this work in the property saved.

W. C. Shepard, Chief, Pittsfield, Mass.: All apparatus in this department is equipped with one foam and two soda and acid extinguishers.

I have no suggestion to make regarding improving the effectiveness of the portable extinguisher outside of the practice to cover extinguishers carried on apparatus in winter, with a heavy blanket, to keep them from freezing.

The Fire Department should service small extinguishers. Last year this department recharged 687 outside extinguishers for homes, business places, factories, in fact for any one who sent them to a fire station. We recharge all extinguishers in sixteen large school buildings, four large hospitals, City Farm and one tuberculous camp each year. Each extinguisher is labeled and dated.

Donald J. Rayburn, Chief, Eldorado Kan.: We carry one 2½-gallon soda acid, one 2½-gallon foam type and two 5-gallon hand pump extinguishers on each of our pumps, and the same on our ladder truck.

A pump with continuous stream for the 5-gallon type water tanks would be a great improvement over the present type used.

We have serviced on an average of 300 small extinguishers a year for the past four years, free to the owners.

August G. Derra, Chief, Schenectady, N. Y.: The inverted type of extinguisher should be carried on apparatus, not less than two on pumpers and not less than four on ladder trucks.

At the present I can think of nothing to improve the effectiveness of the present-day extinguishers for they are as near perfect as they can be.

This Bureau has for many years serviced extinguishers without charge except for recharging foam extinguishers.

For service of recharging extinguishers for persons outside the corporate limits of the city, we charge 25 cents and have a charge of $1.50 for foam in or out of the city.

We carry two extinguishers on pumpers and ladder trucks at the present time, that is, one soda and acid and one foamite. It is my intention to install two more on each ladder truck.

Harry M. Bird, Chief, Stoughton, Mass.: We carry on our engines two 2½-gallon soda acid extinguishers and find that by also carrying one foam extinguisher we can combat any ordinary fire with the exception of electrical fires which require carbon tetrachloride or CO_2 extinguishers.

On our truck we also carry two 2½-gallon soda acid and one foam extinguisher. These handle the ordinary incipient fire. We believe that all makers of portable fire extinguishers should do away with the lead discharge nozzle which gets jammed and bent rendering the extinguisher useless for the moment. These extinguishers would be much more serviceable with a hard brass nozzle. We firmly believe in servicing extinguishers for home use and very often defective gaskets, hose and extinguishers are discovered by the firemen which would not be discovered by the general public. When this work is taken care of by the Fire Department, it also insures the public that they are properly charged.

C. A. Wolverton, Chief, Port Angeles, Wash.: I believe that one or two foam extinguishers should be carried on a pumper. One or two portable pumps should also be carried for they practically replace the soda and acid type. One tetrachloride extinguisher should also be included. The CO_2 gas or Fyre Freez extinguisher would be useful if money is available to purchase them. In this case it would replace the foam.

I believe the Fire Department should recharge the extinguishers, for it has been my experience to find several soda and acid extinguishers overcharged and also hose lines plugged up so there is a possibility of a rupture.

As a suggestion I would state that all foam extinguishers should be of the Fire Department type so they cannot be charged by tipping them over as the result of careless handling.

S. R. Allen, Chief, Brookline, Mass.: One soda and acid and one foam type of extinguisher should be carried on the pumper; the same on the ladder truck with any additional extinguishers of special types such as Fyre Freez, etc.

Soda and acid extinguishers, if brought to the nearest station should be serviced by the Fire Department for the cost is comparatively small.

I do not, however, believe in charging other types on account of the expense. I would furnish the labor if the citizen would furnish the ingredients.

George Donovan, Chief, Urbana, Ohio.: All fire apparatus should carry two soda and acid, one or more foamite, and one 1-gallon carbon tetrachloride extinguishers. In the case of small fires, the pumper lines are never used.

Soda and acid extinguishers, I believe, should break quicker and a longer hose of say from six to ten feet should be placed on them so that a fireman could use this hose to a better advantage.

As Chief here, I have always serviced the extinguishers in factories and homes for a normal sum. I also advise the use of more extinguishers in the homes, as many times these units are able to hold the fire until the firemen arrive.

W. M. Seeley, Chief, Middletown, N. Y.: I believe that on all pumpers there should be one soda and acid and one foam type extinguisher. We We carry one of each type on all six of our pumpers. As our ladder truck does not respond to all fires, we carry but two 2½-gallon soda and acid type on this truck.

I have never given much thought to improving the effectiveness of portable extinguishers.

I believe that all Fire Departments should service extinguishers used in the home for the reason that it is a part of the fire prevention work of a department. We service all kinds of extinguishers both in the home and in the commercial district and make a charge of 75c for each refill.

E. C. Haskin, Chief, Highland Park, Ill.: We carry on all pumpers one 2½-gallon hand pump and one 5-gallon hand pump in addition to a 40-gallon chemical tank. The ladder truck carries two 2½-gallon foam extinguishers, two 5-gallon hand pumps and a 40-gallon chemical tank.

I do not think it would be possible to service small size extinguishers as it would require the stocking of too many different chemicals. I believe that arrangements should be made to have a hardware dealer stock recharges for all makes and refer inquiries to him.

We recharge all soda and acid type of chemicals for schools, hospitals and institutions.

Wm. J. Grove, Chief, Hannibal, Mo.: We have good results in carrying two three-gallon soda-acid type extinguishers, three-gallon foam, and a one-quart size Pyrene gun on each car. We have found the soda-acid extinguisher very effective on automobile, small roof and closet fires. The foam extinguisher has been very useful in extinguishing oil fires. We have used the Pyrene guns on gasoline and wire fires with good results.

Due to the fact that we have found the above types of extinguishers so effective, I can not suggest any improvements at this time.

We charge all extinguishers which are brought to

(Continued on page 657)

HERE IS THE PROBLEM FOR THE NEXT ISSUE

Do you have test calls on your siren each day, and when is the test blast given?

Has confusion resulted from blasts blown on your siren and the one in the neighboring village?

If so, how have you remedied the situation?

What has been the farthest that your signals have carried?

With the Editor

Prepare for Fire Prevention Week Observance

It is not a bit too soon for Chiefs of Fire Departments to begin preparation for the observance of Fire Prevention Week, which occurs on October 4 to 10, inclusive. While it is, of course, a wise policy to "make every day Fire Prevention Day," still the period annually set apart for the special consideration of the subject of fire safety provides an unusual opportunity to bring home to the people the need for care in all matters connected with the menace of fire.

Many cities prepare a special program of events for this week, and it is a gratifying sign that in a great majority of such observances the Fire Chief is either in charge, or is the adviser of the committees preparing the celebration. This is as it should be. The head of the Fire Department is, both by reason of his position and of his training, the one individual who is best fitted to prepare and supervise the instruction of the public in the matter of fire prevention.

The Chief should call to his assistance any of the citizens who are interested in the subject, and especially those who are good public speakers. An intensive campaign should be carried on throughout the week which should include the schools—public, parochial and private—and volunteers among those who are to assist should be chosen for their fitness to talk to the young people, a gift not possessed by every one.

Other objectives should be the churches on the Sunday of the week, and also at week day meetings of the congregations; the civic associations and social clubs, fraternal organizations and all such gatherings; the theatres and moving picture houses, and other places of entertainment, and so on. It will be found that, as a general rule, hearty cooperation will be met in all of these instances, and any number of volunteers can be used to fill all of the engagements in covering the various features of the campaign.

Of course, the radio and the newspapers must not be neglected. These offer splendid opportunities to reach the public in short and snappy talks on fire prevention over the air and in well written and interesting articles for the columns of the weekly or daily papers. If possible, a page ad or two in the local papers will be found of advantage, not only in reaching the public but also in cementing the cooperation of the newspapers themselves.

The women of the municipality should not be forgotten. There should be several women on the committees in charge of the observance and also on the subcommittees arranging the various activities. A plan adopted by one large city is to organize the women by wards for the purpose of promoting a "model mile of clean streets" in each ward. It will be found, once their interest is aroused, that the women will be enthusiastic workers in the cause of fire prevention.

The Fire Department itself, naturally, will take a prominent part in the observance of the week. Apparatus that can be spared will be decorated with appropriate signs and inscriptions and will parade the streets of the city. The members of the department will distribute fire inspection blanks and other literature to the residences and business places. Those who can speak in public will assist in the school and association work. If possible, demonstrations in public showing the methods of using the fire alarm box should be given. A good plan is to install a dummy box on a truck and detail a man or two to cover the entire city, giving instruction to any citizen who may be interested.

These are a few of the multitude of ways in which the subject of fire prevention may be brought home to the unthinking public during the week devoted to this most vital subject.

Selling the Department to the Public

There was a time when the general public regarded the Fire Department as a necessary evil. It was useful when a blaze occurred, and it could be summoned to put it out. But even then the men caused so much damage by the water they poured on the fire and the ripping and tearing they did to accomplish its extinguishment, that the remedy was looked upon as being almost as bad as the trouble. Oftentimes this reputation was undeserved, when a careful Chief saw to it that his men did as little damage as possible, with the facilities at hand and the knowledge that he and his men had of the science of fire fighting. But too frequently the belief in the destructive powers of the Fire Department was justified by the actions of the men themselves.

Now all this has been changed. The public has come to appreciate its Fire Department as the most valuable asset that the city or town possesses. And the secret of this change in sentiment lies in the work of the departments themselves. Chiefs throughout the length and breadth of the land have come to realize that favorable public opinion is a most important thing, and that the way to gain this confidence is to culivate it. The one thing that has accomplished this end is the doctrine that a fire must be put out with as little damage to property as possible. With this view in mind, Fire Department salvage companies have been established, or if the city or town be too small to warrant such an expense, covers are being carried on the apparatus and the men are all instructed in the science of salvage. The public will at

once recognize the work of the department in avoiding all unnecessary damage, and in saving the contents of buildings that would otherwise be ruined by the water thrown on the blaze.

An interesting instance of the splendid work a Fire Department can do, when propertly instructed and equipped for salvage, was well illustrated by an act of public service by the department of Kingston, N. Y. In this case, there was not even a fire. During a severe rain storm in the city, a 6-inch leader pipe, situated between the roof and the ceiling over the telephone exchange, burst from the heavy pressure of the rainfall, and threatened to flood the instruments of the exchange. A call for help to the Fire Department resulted in quick response, and, under the direction of their Chief, the men spread their salvage covers over the switchboards, thus saving them from damage and enabling the operators to continue answering calls without interruption.

After the storm was over, the firemen remained and assisted in removing the water and fallen plaster which resulted from the accident. The telephone officials were loud in their praise of the work of the department and the expense their promptness and efficiency had saved the company and the newspapers quickly recognized the public spirited action of the department in responding to the call for extra duty without a quibble. The Fire Department had sold itself to the public!

Former Chief Gerstung Honored

Ex-Chief August Gerstung, who retired from the Fire Department of Elizabeth, N. J., on August 1, after a service of forty years, was honored by a testimonial dinner at the Elks' Club, in that city, on August 20. The dinner was attended by over 500 friends of the Chief. Included in the group were members of the veteran firemen's organization with which Chief Gerstung was associated in the days of the volunteers, city and county officials whose admiration for the Chief led them to join in the tribute, and members of the present-day paid department, nearly all of whom have entered the service since its inception in 1902. In addition, twenty-nine Chiefs of Fire Departments in neighboring municipalities, as well as officers of the International Association of Fire Chiefs were present under the chairmanship of former Chief Paul J. Moore, of Newark.

Ex-Chief August Gerstung
Elizabeth, N. J.

Chief Gerstung was the recipient of a gold watch, engraved with a message from his friends, and a purse of $2,000, both gifts being subscribed by the dinner patrons.

At the same hour the chief was being honored at the auditorium, a group of women whose husbands or fathers are connected with the department surprised Mrs. Gerstung at her home in East Jersey Street, with the presentation of a basket of flowers and expressions of good will.

Ambrose McManus, of McManus Brothers, was toastmaster at the dinner and the speakers included Mayor John F. Kenah, August Kaczmarek, President of the Board of Fire Commissioners; former Judge Edward A. McGrath, County Judge Alfred A. Stein, Assemblyman Charles A. Otto, Jr., Attorney Donald H. McLean, City Attorney Edward Nugent, William J. McCloud, President of the Board of Water Commissioners, and Chief Gerstung, who acknowledged the tributes paid him and thanked the gathering, through Mr. McManus, for the gifts.

Telegrams of regret were received from several out-of-town Chiefs unable to attend, and greetings were also received from United States Sen. Hamilton F. Kean, who had been invited but could not be present.

On the general committee for the affair were the present Chief, William H. Kenaly, as Chairman; Frederic J. Faulks, as Vice-Chairman; Fire Commissioner Charles S. Chandler, as Treasurer, and William J. Cox, as Secretary. Other members were Dr. Otto Wagner, Grenville A. Harris, Jacob Reuter, Commissioner Keczmarek, and Deputy Chief Frederick A. Clark.

In the group of fire officials from other places were:

Former Chief Moore, of Newark; Chief Harry J. Becker, South Orange; Chief Ernest G. Beckert, West New York; Chief Roger Boyle, Jersey City; Chief Walter J. Bond, Union; Chief Reginald H. Bowker, Passaic; Chief Andrew T. Callahan, Harrison; Chief Albert Chamberlain, Hillside; Ex-Chief Peter B. Carter, Camden; Chief Thomas L. Coyle, Westfield; Chief W. J. Dunn, Plainfield; Chief J. Gibbs, Montclair; Chief John J. Gilday, Hoboken; Chief Charles E. Greenfield, Arlington; Chief Chris Hasselhuhn, Carlstadt; Chief Frank T. Miller, Linden; Chief James J. Mulcahey, Yonkers, N. Y.; Chief Charles A. McGinley, East Orange; Chief William S. McLaughlin, Bayonne; Chief James J. McMillan, Orange; Chief Knowlton F. Pierce, Kearney; Chief Walter H. Ritzman, Rahway; Chief Frank T. Smith, East Newark; Chief D. J. Sullivan, Utica, N. Y.; Chief John J. Towey, Newark; Chief Jacob Vachal, Roselle; Deputy Chief James Hogan, Bayonne; former Deputy Chief William J. Mahoney, Elizabeth.

To Hold Second Annual Ohio Fire School

The Second Annual Ohio Fire School will be held at The Ohio State University, Columbus, on September 21, 22, 23, and 24. This School is endorsed and sponsored by The Ohio State University, the State Fire Marshal of Ohio, the Ohio Fire Chiefs' Association, the Fire Prevention Association of Ohio, and the Ohio Inspection Bureau. It is conducted for the purpose of imparting practical and useful information to fire department officers and their men, to the end that they may become more proficient and capable in their work.

The Course is designed to cover a wide range of useful subjects, and all instructors are men of experience, qualified to handle their particular subjects. Instruction will be both theoretical and practical. Many visual demonstrations of actual conditions encountered by firemen will be given, and talks will be illustrated.

There will be no tuition charge in connection with this course and good lodging accomodations near the campus will be arranged for by the Universtiy at the nominal charge of $1.00 a night. Meals will also be available near the school at very reasonable prices. Harvey Walker is Chairman of the Fire School.

Laredo, Tex., Has Searchlight Truck—Laredo, Tex., has added a searchlight truck for use at night fires. It is patterned after the one installed in Beaumont.

Peekskill, N. Y., Co. to Celebrate 100th Anniversary—A Centennial Parade and Celebration to cover two days is to be held at Peekskill, N. Y., to celebrate the one hundredth anniversary of Cortlandt Hook and Ladder Company No.1, of the Fire Department, on September 23. It is expected that some 2,500 Chiefs, officers and firemen from villages of the Hudson Valley and Westchester County will be present on the occasion.

THE COVER ILLUSTRATION

While the extinguishment of the fire in the building involved is the most important function of the Fire Department at a blaze, after the life hazard has been taken care of, the officer in charge must not neglect the protection of exposures, especially where the building is in near proximity to other structures. In the fire illustrated on the cover of this issue of FIRE ENGINEERING—an account of which appears on page 653—a very serious hazard of this kind is shown.

In handling this fire in the abandoned and very old church, the New York Fire Department did excellent work in protecting the tall buildings which flanked the low structure, with the result that no appreciable damage was done beyond the building of the origin. The church had been built eighty-six years and was in process of demolition when the fire occurred.

Questions and Answers

NOTE—Readers are invited to send in questions, which will be answered in the order received. Names are omitted from questions unless otherwise specified

Fire Protection vs. Insurance

To the Editor:

I have a problem which I would appreciate your advice on.

Is it cheaper to purchase fire equipment or to pay more for fire insurance?

L. J. H.

Answer: It is much cheaper to purchase fire equipment and maintain a fire department than to pay more for fire insurance. That's why insurance companies found it profitable to establish their own fire departments in the early days of insurance. Subsequently, with the organization of municipal departments, the insurance interests established salvage corps to reduce fire losses. The fact that these corps are still in existence shows that it must pay insurance companies, and it would therefore pay the public to maintain well-equipped departments.

As a matter of fact, one fire may represent a loss to a city far greater than the entire cost of maintaining the department for an entire year. The cities with the lowest insurance rates are those which have the best equipped and organized departments. A small drop in insurance rates means a tremendous aggregate saving for the insured in any municipality

Range of Small Stream

To the Editor:

Will you kindly enlighten me on the following questions.

Operating from a 4" hydrant with approximately at 70 pounds pressure; pumper is of 750 gallons capacity, and of 2 speed transmission.

Discharge line is 600' of 2½" hose. Nozzle is of shut-off type with ¾" tip.

From hydrant to nozzle, street on which line is stretched is level.

1. I wish to know the approximate distance into the air that stream may be thrown with said conditions and equipment.

2. Should pump gauge correspond with setting of relief valve?

3. With only one line should pump transmission be used in capacity or pressure to throw stream at highest possible point?

H. P. B.

Answer 1. Problem does not specify at what pressure engine operated. Assume that it is operated at 120 lbs. pressure, which is the pressure usually employed when pumping for "capacity," calculations would be as follows:

N.P. = E.P. ÷ (1.1 + K L)

K, which is a factor depending upon hose and nozzle diameters, is, for 2½-inch hose and ¾-inch nozzle, 0.0316. This factor is secured by multiplying ¾ x ¾ x ¾ x ¾ and divided by 10.

L, which is the number of 50 foot lengths of hose in the line, is 600 divided by 50, or 12.

Subsequently using the formula we get:

N.P. = 120 ÷ (1.1 + .0316 × 12)
= 81# nozzle pressure.

Test figures show that at 81 pounds nozzle pressure, a ¾" stream will reach a maximum average height of 124 feet vertically. It will reach 79 ft. vertical limit, with good results, if in still air. In other words, the stream will be effective up to 79 ft. where there is no wind blowing. With moderate wind blowing, its effective vertical range is 62 ft.

The discharge from the ¾ inch nozzle at 81 pounds pressure is approximately 150 gallons per minute.

Answer 2. No, the pump gauge should not correspond with the setting of the relief valve. The relief valve is set to relieve the pressure at the engine when it exceeds a predetermined amount, and is intended to safeguard the hose line and the men. Relief valve setting is usually considerably more than the pressure at which the pump is to be operated.

Answer 3. With only one line in operation, either "capacity" or "pressure" gear might be employed on the pumper. Using it in "capacity," and getting 120 pounds at the engine discharge, we have a nozzle pressure of 81 pounds, which is as high as need be with this size of tip.

But if it is desired to secure a much greater pressure, then the engine can be thrown into "pressure" and a greater nozzle pressure secured thereby.

As to the greatest height which a stream ¾" diameter can be driven, it would not be much in excess of that given for 81 pounds. There will be considerably more spraying and it is likely that not more than 30 feet additional range can be secured from a ¾" nozzle irrespective of how much the pressure at the nozzle is increased.

Pressure in Small Line

To the Editor:

A booster pump is pumping through 200 feet of three-quarter inch chemical hose equipped with a one-quarter inch tip, the pressure at the pump is 50 pounds; what is the friction loss in the hose, the pressure at the tip and the discharge in G.P.M.

B. A. L.

Answer: The simplest means of solving the problem is to first reduce the 200 feet of three-quarter inch hose to 2½-inch hose, and then employ the Underwriters' formula for solving for nozzle pressure.

The factor for changing ¾" hose to 2½" hose is .0029.

200 ÷ .0029 = 68,966 or 69,000 ft. of 2½" hose.

The value of "K" for ¼" tip on 2½" hose is found as follows:

K = ¼ x ¼ x ¼ x ¼ ÷ 10
= .0039 ÷ 10 = .00039.

"L," the number of 50 foot lengths of hose in the line, = 69,000 ÷ 50 = 1,380.

Then N.P. = 50 ÷ (1.1 + .00039 x 1,380)
= 50 ÷ (1.1 + .5382)
= 50 ÷ 1.6382 = 30.5# approximately

Friction loss in the line is equal to 50—30.5 = 19.5#

Discharge is found as follows:

Discharge = $30 \times d \times d \times \sqrt{30.5}\sqrt{P}$
= $30 \times ¼ \times ¼ \times \sqrt{30.5}$
= 30 x .25 x .25 x 5.52
= 10.37 gallons per minute.

Drying Hose

To the Editor:

Will you please answer the following question.

"A" says that in his home town in the States, when a company returns from a fire where the hose has been used, it is washed and hung up to dry in the hose tower, and that hose is left hanging there after it is dry and that same is not taken down until it is needed to replace wet hose on apparatus. Now then "A" says that this hose is apt to hang there for a period of days, a week or a month. He also says that every station has a hose tower.

"B" says that he thinks that after the hose is found to be dry it should be taken down and rolled up and stacked so as to allow for proper ventilation. "B" says that he thinks there is a certain amount of strain on the couplings if hose is allowed to hang longer than sufficient time for the hose to dry.

R. J. McC.,
Canal Zone, Panama.

Answer: Many fire stations in this country have hose towers, wherein hose is hung until dried. In many instances it remains in the tower until required to replace wet hose on apparatus. In some stations, it is removed, after being dried in the tower, and placed on racks until required for replacement in the hose body.

The better practice of the two is to place the hose on racks after drying in the tower, but it should not be permitted to rest in one position on the racks indefinitely. If the hose is not changed frequently, there is a chance of permanent set taking place at the bends, and the hose lining may subsequently crack when put under pressure.

Many fire stations have hose drying racks which consist of two parallel inclined shelves on which the hose is placed, with the bend at the highest point. This permits the water to drain from the hose through both couplings. This arrangement is very satisfactory, for the hose can remain on the rack until required for replacing wet hose in body of the apparatus.

OKLAHOMA FIREMEN'S TRAINING SCHOOL HOLDS SECOND SESSION

Quarterly School for Fire Department Instructors Meets at Tulsa — Large Attendance — The Faculty of the School

THE second Quarterly School for Fire Department Instructors was held in Tulsa, July 27, 28 and 29. There was a total enrollment of 61 from 28 cities, as follows: Altus, Alva, Bartlesville, Blackwell, Chickasha, Carnegie, Clinton, Cushing, Elk City, El Reno, Enid, Henryetta, Hobart, Magnum, Muskogee, McAlester, Norman, Oklahoma City, Perry, Prague, Sapulpa, Sayre, Shawnee, Stillwater, Tonkawa, Tulsa, Walters, and Wewoka.

A great deal of interest and enthusiasm was manifested by those participating. The co-operation accorded by the Tulsa Fire Department contributed a large measure to the success of the school. All off-shift company instructors attended every session.

The morning sessions were devoted to class room work and at the afternoon sessions practical drill evolutions were given. Those attending were assigned to six different companies, each under command of a captain. All evolutions were executed by each company in turn, and the time required by each was taken and recorded. A real spirit of competition was thus developed, and much enjoyment, as well as benefit, was derived by the participants. Officers, Instructors, and Captains were as follows:

Director, J. E. Taplin, Blackwell
Assistant Director, Chief E. H. Miller, McAlester
Secretary, Chief J. R. Pence, Stillwater
Secretary, Chief S. C. Boaz, Henryetta
Drillmasters, Capt. C. C. Jennings, Tulsa and Deputy Chief J. J. Lynn, Oklahoma City
Instructors, Chief Geo. B. Goff, Oklahoma City; Boise Fulkerson, Norman; R. L. Williams, Tulsa; Lee Church, Enid; Chas. Eslick, Shawnee and Carl Rodman, Wewoka
Captains, W. A. Chestnut, Co. A, Chickasha; W. J. Kimball, Co. B, Elk City; R. L. Williams, Co. C, Tulsa; Boise Fulkerson, Co. D, Norman; Frank Scott, Co. E, Sapulpa and Wes Warren, Co. F, Alva

Assistant Director E. H. Miller had direct supervision of all drill evolutions, which were given under the instructions of Drillmaster C. C. Jennings. Drillmaster J. J. Lynn was unable to attend.

Colonel Hopper, and Charles Slemp were present during the sessions. Chief J. R. Pence, on the evening of July 28, gave an illustrated lecture on Ventilation. Chief Pence has all of the stereoptican slides in use by the Los Angeles Fire College, and a projector for showing them on a screen. Visual instruction is used extensively in Fire Department instruction.

Chief R. E. Pitts of Tulsa gave a very interesting demonstration of a smoke ejector which has recently been built by that department. The machine clearly demonstrated its efficiency, in that, although the building was well filled with smoke, it was so quickly removed that onlookers hardly realized the demonstration was over.

New Chicago Acting Fire Commissioner

Mayor Cermak, of Chicago, on August 15, appointed Daniel J. Carmody, Deputy Chief Fire Marshal of the Fire Department, as Acting Fire Commissioner, displacing E. A. Maloney. Mr. Maloney is to return to his old position as Deputy Commissioner and Secretary of the Fire Department.

While Commissioner Carmody, as acting chief, will be in full charge of the department at all times, he also will be on active duty in charge of fire fighting forces every other day.

Fire Marshal Michael J. Corrigan will be in charge of the second of the two platoons.

The arrangement saves $5,000 in salaries as two drivers will go back on the regular force. The last two men to sign will be released temporarily, and placed at the head of the eligible list.

Acting Commissioner Carmody will receive no increase in salary. Joining the fire department April 30, 1901, Carmody's record is marked by bravery. He became deputy chief in October, 1929.

In the great stock yards fire of 1910, when Chief Fire Marshal James Horan and twenty-two other fire fighters lost their lives, Carmody saved the life of Chief William Burroughs. Later he was to gain fame by settling one of the moot questions of the hour—whether in case of a fire a man should save his wife or his mother.

He was at a fire when a man rushed up to him and asked him which he should save—they were both screaming for help in the burning building. Carmody told him to save his wife; that he'd save the mother. He did.

Oroville, Cal., to Open Fire Stations—A new fire station will be opened in Oroville, Cal. It is believed that the house will be opened in October.

The Oklahoma Firemen's Training School in Session at Tulsa

ABANDONED CHURCH STRUCTURE BURNED IN NEW YORK CITY

Interior Had Been Previously Stripped, Subsequent to Demolition — Built Eighty-Six Years Ago—Fireman Injured

THREE alarms were sounded at about 11 a.m., on August 23 for a fire which burned the old Unitarian Church of All Souls, which had stood for eighty-six years at the corner of Twentieth Street and Fourth Avenue, New York City. The structure had been abandoned by the congregation in 1929, and it had not been occupied as a place of worship since that time. It was said that unemployed

New York Firemen Fighting Blaze in Abandoned Structure of All Souls Unitarian Church

Building was in process of demolition to give place to an apartment hotel, and the interior woodwork had been torn out.

men had been permitted to sleep in the old building of late, and that during the past few months four alarms of fire had been turned in.

The first indication of fire was given by smoke pouring from the windows of the building, and the alarms brought a response of eighteen companies, under the command of Acting Chief John Davin. The men threw streams into the interior of the building through the doors and also worked from the vantage point of the surrounding structures. A standpipe in the fifteen-story building at 239-243 Fourth Avenue was utilized to throw a powerful stream on the blaze. Fire Commissioner Dorman, who was present at the fire, expressed himself as pleased at the manner in which the fire fighting was handled. Traffic on Fourth Avenue was held up and thirty policemen were employed in rerouting the stream of autos, taxis and trucks around the fire area.

A fireman was injured when a sharp piece of slate from the roof of the church fell and cut his hand. Ten firemen also were in peril in the parish house adjoining the church, which they entered, thinking it was a separate structure. The wall dividing it from the church, however, had been partly cut away, and the men on the upper floors had a narrow escape from being suffocated by the smoke which seeped through the aperture. They were forced to retreat down ladders.

The church had been the house of worship of many celebrated persons, among whom were Peter Cooper, William Cullen Bryant, Dorman G. Eaton, Joseph Choate and later, George F. Baker. The late banker gave $100,000 to the building fund and his son presented the church with the interest on a sum borrowed for a building fund, said to be $400,000. This interest was estimated to amount to over $100,000. The structure was of Byzantine architecture and had stood as a landmark on its site for many years.

WHAT'S BURNING

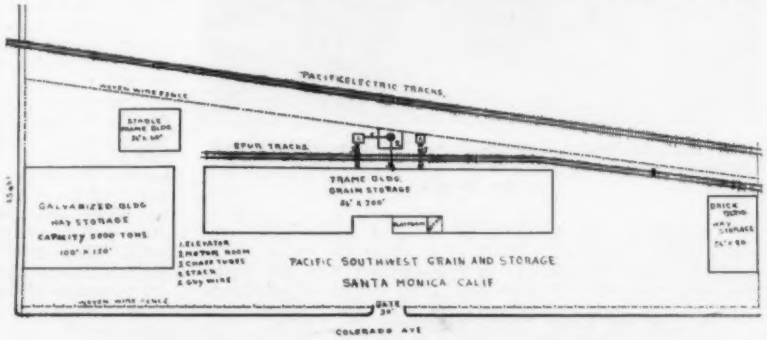
THE following list includes fires of $25,000 loss and over in the United States and Canada, for the periods designated in the headings. These figures, compiled from telegraphic reports, are based on estimates made at the time, and are subject to later investigation and consequent revision. Taken as a whole, however, they give an approximately correct view of the losses incurred. The figures represent loss in thousands of dollars.

Week Ending August 21	Loss in Thousands of Dollars
WINCHESTER, VA.—Glaize & Bros. lumber yards damaged	45
SALEM, IND.—Mill and elevator of Cauble Milling Co.	25
OIL SPRINGS, ONT.—Grain elevator, mill and cement plant	45
S. GROVELAND, MASS.—Hale Mill damaged, A. H. Veasey, owner	25
BURLINGTON, N. C.—Plant of Burlington Daily Times destroyed	50
CHICAGO, ILL.—Business property, 9258-74 Chicago Ave.	45
DUNDEE, IND.—Urmston Grain elevator destroyed	25
REINBECK, IOWA—Reinbeck Lumber Co. yards, adj. property	35
CADILLAC, SASK.—Buckwold store, adj. bldg.	25
AURORA, IOWA—Several business establishments destroyed	45
SINCLAIR, MAN.—Business and residential property	45
DALLAS, TEX.—Bldg. occupied by United Glass & Mirror Co.	25
ROCKPORT, ILL.—W. H. Haynes store destroyed	30
HOUSTON, TEX.—Plant of Texas Bag & Burlap Co.	35
GREENVILLE, MISS.—Supply depot of U. S. Government	25
HOUSTON, TEX.—Three furniture establishments damaged	45
CHICAGO, ILL.—Union stock yard stables	25
WENATCHEE, WASH.—Rock Island mess hall destroyed	60
RICHLAND, IND.—Martin Hotel, adj. property	25
CHESTER, MASS.—Bldgs. of Chester Granite & Polishing Co.	80
BEEBE, ARK.—Ragsdale Motor Co. building destroyed	25
BAINBRIDGE, GA.—Bldg. occupied by Ford Agency destroyed	40
Week Ending August 28	
BUFFALO, N. Y.—Wavecrest Country Club destroyed	25
DENTS, S. C.—Dwelling, store and whse. of Simon Faust	35
WILSALL, MONT.—O. E. Keya Hotel, adj. property	125
ELIZABETH, N. J.—Plant of Schonwalter Tallow Co.	45
COGGON, IOWA—Farm property of A. J. Weeden, 1 mi. East	25
BUFFALO, N. Y.—Buffalo Launch Club, Grand Island	65
VICTORIA, B. C.—Cadboro Bay Hotel destroyed	35
PORTLAND, ORE.—Bldg. occupied by Oregon Savinar Produce Exchange	30
MIKANA, WIS.—Barn on Frank Stout farm destroyed	25
BORGER, TEX.—Refinery of Phillips Petroleum Co. damaged	75
SHREVEPORT, LA.—Kalmbach-Burckett feed plant damaged	30
SEATTLE, WASH.—National Steel Construction Co. plant damaged	80
YORK, PA.—Whse. of Hespenheide & Thomas Co. damaged	80
MELROSE, MASS.—Melrose City Club damaged	45
HAINES FALLS, N. Y.—Antler's summer hotel destroyed	65
NORFOLK, VA.—Pocahontas Gun Club, Back Bay, destroyed	35
GIBSONBURG, OHIO—Woodworking plant of Gordon Lumber Co.	65
IOWA FALLS, IOWA—Coal chutes of Illinois Central R. R.	25
ELKO, B. C.—Block of twenty residences, two churches	25
ROCHESTER, N. Y.—Hayward garage destroyed	35
YAKIMA, WASH.—Warehouse of Tieton Storage Co.	50
FOND DU LAC, WIS.—Tile plant of Joseph Wirth Co.	25
ROCKDALE, WIS.—Six bldgs. on Oakdale Farm destroyed	30
FERGUS FALLS, MINN.—Martin Benson's furniture store	45
YORK SPRINGS, ONT.—O'Keefe Brewery whse, destroyed	30

Hay Fire Has Peculiar Genesis

Indirectly the switching of a number of box cars can be said to have been the cause of a most peculiar fire in a large hay and storage company building in Santa Monica, Cal. Directly, it is possible to attribute the blaze to a wire fence that was connected to the damaged building.

The storage building had a capacity of 5,000 tons of hay.



Diagrammatic Arrangement of Hay Storage Buildings

The chaff tubes run over the spur tracks from the elevators (1) to the grain storage building. Motor room is indicated by 2 and the chaff tubes by 3.

A woven wire fence went around the grounds and at two points was joined to the galvanized iron building. One stretch of the wire fence was parallel to an overhead wired electric track system.

The overhead trolley wire had become loose from the arm of the locomotive and came in contact with a 12-inch chaff pipe. The high voltage current traveled along the wire fence to the metal building. The woven wire was supported by wooden posts and as the wire was placed five inches above the ground, no ground was made, but a direct electrical path was provided to the building.

Practically all of the hay became involved at once in the resulting fire. Since experience has shown that burned hay had little salvage value as feed or fertilizer, the department worked to prevent the spread of flames to other buildings. The distance between buildings was fifteen feet and the buildings were forty-five feet high. Falling walls and baled hay furnished additional hazards. Three engine companies answered the fire alarm.

THE FIRE BRIGADE OF THE WORLD'S TALLEST BUILDING

Organization That Protects the Empire State Building in New York City—How the Members Are Instructed

By WM. JEROME DALY

THE Empire State Building in New York, the tallest structure (1,248 feet) in the world was built to meet every known fire hazard and consequently we may be pardoned for saying here that structurally it is as fireproof as the science of fire protection can make it.

On the principle, however, that a fireproof building is only as fireproof as its contents, the management installed with

Chief Bart. Mahoney, Empire State Building Fire Brigade, Throwing Switch to Start Main Pump of Tallest Building in the World

the opening of the building, a resident Fire Chief, who immediately organized a fire brigade from the ranks of the building's staff of workers in the daytime and the night-time watchmen-firemen who ring time clocks on all floors.

Retired New York Firemen on Force

Bartholomew J. Mahoney, a former Lieutenant in the New York Fire Department, was selected for the post. He retired from the N. Y. F. D. on a pension, February 17, 1922, having served twenty-one years, during which he was an engineer of steamer and later junior officer. Before entering the Fire Department, he was a plumber.

Mahoney was made Chief of the Empire State Building Fire Brigade and for the night-time watchman-fireman service he employed seventeen retired members of the New York Department. The day-time force is composed of the men employed in the building as mechanics, painters, carpenters, porters, electricians, plumbers, elevator starters and the two house detectives, both of whom are retired members of the New York Police Department. The day-time force needed more instruction and training than the veteran smoke eaters who are on night duty. Chief Mahoney is therefore holding weekly fire drills for these day-time workers and the writer happened to be in the building last week when the house signal sounded for an imaginary fire on the fourth floor.

The Fire Protection System

The building, located on the west side of 5th Avenue, from 33rd to 34th Streets, is 197 feet on the avenue and 425 feet on each street, covering an area of 83,850 square feet and containing 37,000,000 cubic feet inside of its 102 stories. There is an observatory roof at the 86th floor. The mooring mast for probable anchorage for dirigible air ships (if the U. S. Government ever sanctions it) is 200 feet higher than the 86th floor. The structure can house 25,000 tenants when completely filled, and it is estimated that its transient daily traffic will be about 40,000 persons. There are 63 passenger elevators and four freight cars, all signal controlled and self leveling. Express cars reach the 80th floor from the ground in less than one minute. All elevators travel at the rate of 1,200 feet a minute. There are more than 17,000,000 feet of telephone and telegraph circuit in the building.

All of this is reported here to give the reader a better idea of what a fire brigade in such a structure has to contend with. It is a city in itself and is so enormous that a fire could be raging in one part of it and nothing known about it in another section of the building.

The building fire alarm signal boxes of which there are two on each floor, basement and sub-basement up to the 20th floor and thereafter only one box per floor, are connected with the National District Telegraph Company's central office and from there relayed to the city Fire Department's central station. The signal for the building is 3—715—1 which means Special Building signal for street box 715—the terminal indicating that it is for the Empire State Building. Such signal will bring three engines, two ladders, the Fire Patrol and a battalion chief by assignment. The boxes are the "break the glass" type and one pull is good for four rounds of the signal, which also strikes in all elevator shafts, engine and pump rooms, house detective's quarters, first aid room and Fire Chief's office, as well as the operating offices of the building.

There are 388 soda and acid extinguishers of 2½ gallons each distributed throughout the building. Some floors have 16 of them, others 8 and others 4, depending on the floor area. There are 54 carbon dioxide extinguishers of ten pounds each in all fan and machine rooms or wherever there is a terminal or a battery compartment. In the basement there are two soda and acid extinguishers of 40 gallons each, on wheels, with 100 feet of hose each. Also one fire foam extinguisher of 33 gallons. The building is heated by steam supplied by a public utility company.

The fire standpipe system is fed from water mains on Fifth Avenue, 33rd and 34th Streets. A special four-inch water supply pipe under 33rd Street is exclusively for fire fighting purposes. The building has five risers eight inches in diameter, two of which extend to the 83rd floor, two others to the 30th floor and one to the 18th floor. The entire fire standpipe system embraces 7,340 feet of pipe and six miles of hose connected to 2½-inch outlets on all floors.

There are five water supply tanks and five pumps throughout the building. In the sub-cellar is a 750 gallons per minute pump and a 10,000 gallons capacity tank; another pump of 750 gallons is on the 20th floor and a tank of 5,000 gallons on the 21st floor; the 41st floor has a 750-gallon pump and the 42nd floor a 5,000 gallons tank; the 62nd floor a 750 gallon pump and the 63rd floor a 5,000 gallons tank; the 84th floor a 280 gallons pump and the 85th floor a 3,500 gallons tank. These tank capacities are net volume for fire fighting only, although each tank has many times that more capacity, for commercial and domestic uses.

Hose Connections

Ten siamese hose line connections are around the building for pumping engines of the Fire Department to connect to. Four of these are on 33rd Street, four on 34th Street and two on Fifth Avenue. These siamese connections are for

three inch hose butts, and they lead into a six-inch connection to the standpipe risers.

There are 324 hose outlets on the floors for 2½-inch connections. The system has twenty-seven control valves on vertical pipes and forty-nine control valves on all other pipes which will enable the Fire Department to detour or by-pass the water in case of a rupture in the piping or for some other emergency.

The 84th floor pump and the 85th floor tank are for fire service in the tower only. The highest outlet in the system is 1,230 feet high. The mast of the building is 1,250 feet high. The system has been constructed to withstand a pressure of 100 pounds to the square inch at the highest outlet. Each pump is required to deliver water to the tank beyond the next highest intermediate pump and tank station. A telephone system extending from the sub-cellar to the top of the tower facilitates the operation of the system.

Fire Drill of the Brigade

Last week the writer happened into the building a few minutes before the fire drill was sounded. Signal 2-4 was used. This indicates the centre corridor of the fourth floor. Within two minutes, seventeen men from various parts of the building had reported to Chief Mahoney at the alarm box. Some stretched the standpipe line, others grabbed portable extinguishers, another had an axe and others were just there. The two house detectives also reported, as did the elevator starters.

Chief Mahoney counselled the members of the brigade to abide by the custom of first making certain as to the location of the alarm before starting off "half cocked." He advised that it was better to wait and count the second round of the box before getting started. "Be calm, don't speak to persons in the elevator; don't alarm tenants or those doing business with tenants in the building by letting them know there is a fire alarm," the Fire Chief declared.

Chief Mahoney then schooled them in the practice of handling fires in shaftways, how to skip up to other floors and to stretch the house line on each alternate floor above the fire. He instructed them in handling wastebasket fires, how to avoid unnecessary damage by water or with chemicals, and what to do in similar situations. He advised the plumbers to take a position at the valve outlets to control pressure and told them they would find fifty pounds on the line, but that it was not necessary to have that much pressure—that 25 or 30 was enough. Chief Mahoney's brief but educational talk was interesting and he concluded it with instructions on ventilation of the room or office where a fire might happen to be.

Farm Fire Protection on Radio

Farm Fire Protection is to be emphasized over the air through the efforts of the Agricultural Committee of the National Fire Waste Council. Playlets featuring "Smoky" Rogers, the fire clown, will be broadcast each Friday in the National Farm and Home Hour beginning September 4. These dramatizations are to continue for 12 weeks, according to "Smoky," who is known for his work stimulating interest in fire control in many rural communities.

Every effort is being devoted by NBC dramatic writers and the Agricultural Committee of the National Fire Waste Council to present one of the most unusual series of educational as well as entertaining programs of particular interest to those who own rural buildings and other property subject to fire hazards.

In addition to the playlets starring "Smoky" Rogers and NBC star actors, a message from many of the country's foremost leaders will be read. These contributions will emphasize the need for fire protection on the farm.

The program is to be broadcast co-operatively by the Agricultural Committee of the National Fire Waste Council, Fire Insurance Association, and the National Broadcasting Company.

Chief Selden Allen Suffers Broken Arm—Chief Selden R. Allen, of the Brookline, Mass., Fire Department, and Past-President of the New England Association of Fire Chiefs, recently suffered an accident in the breaking of his right arm.

Portland, Me., Inspects Fireboat—City officials of Portland, Me., inspected the fireboat being constructed for the ctiy at East Boothbay, Me. It is believed that if the present rate of construction continues, the fireboat will be launched some time early in October. The power plant will be equipped with five Diesel engines.

Pacific Coast Chiefs to Meet at San Diego

It has finally been decided to hold the 38th annual convention of Pacific Coast Association of Fire Chiefs at the U. S. Grant Hotel, San Diego, Cal., on September 4 to 8. The tentative program is as follows:

Friday, September 4.
9:00 Registration. Headquarters—Lobby, U. S. Grant Hotel.
10:00 Opening session. Plata Real, U. S. Grant Hotel.
12:00 Canadian, Oregon, Washington, Montana and Idaho Luncheon.
1:30 Business session.
3:30 Official inspection of exhibits.
7:00 Business session.
8:30 Round table and Get Together Party. U. S. Grant Hotel.

Saturday, September 5.
6:30 Practical drills by Los Angeles Fire Department at Drill Tower.
9:00 Business session.
11:00 Official photograph in Palm Court of U. S. Grant Hotel.
11:30 Leave for Agua Caliente Race Track from U. S. Grant Hotel. Buffet Luncheon on Club House Lawn at Agua Caliente Race Track.
Evening Night in Old Mexico.

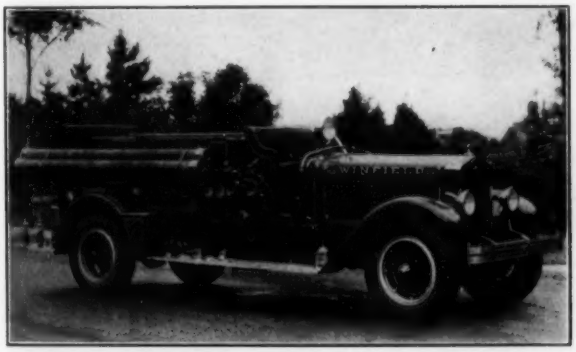
Sunday, September 6.
10:45 Memorial services, Cabrillo Theatre.
Afternoon Coronado and Tent City Day.
7:30 First Aid Contests between First Aid Teams from Los Angeles, Pasadena, Fresno, Eureka, Coronado and San Diego.
8:30 Baseball game between Pasadena Fire Department and San Diego Team.

Monday, September 7.
6:30 Practical drills by Los Angeles Fire Department at Drill Tower.
9:00 Business session.
12:00 Mexico, Arizona, New Mexico, Utah, Nevada and California Luncheon.
1:30 Business session.
3:00 Special Demonstration of Pumping engines and other Fire Fighting equipment at Municipal Pier.
8:00 Dinner Dance. U. S. Grant Hotel.

Tuesday, September 8.
9:00 Underwater life saving tests by Pasadena Fire Department.
10:00 Business session.
12:00 President's Luncheon.
2:00 Business session. Demonstration for standardizing 2½-inch hose threads. Selection of 1932 Convention City. Election of Officers.

New Pumper Makes Extensive Tour

One of the first of the new American-LaFrance and Foamite Corporation "Metropolitan V-12" type pump and hose cars is making an extensive tour of the middle West, starting from the factory at Elmira, N. Y., proceeding thence



New Pumper for Winfield, Kan., Which was Demonstrated En Route From the Factory to Its Destination

One of the first of the new Metropolitan V-12 type of American-LaFrance pump and hose cars, with 12-cylinder engine, to be shipped from the factory at Elmira, N. Y.

to Boston, and on to its destination. The apparatus, which is illustrated herewith, is a pumper for the Fire Department of Winfield, Kan., and much interest has been aroused among chiefs and other Fire Department officials who witnessed the demonstrations of the car en route. Many comments were made on the engine's efficiency and low motor temperature on the prolonged driving and pumping tests during the recent unusually hot weather.

Since announcing this new type of pumper, the company has received orders during the month of July for twenty-four similar units.

Wisconsin Chiefs to Meet at Portage

The third annual convention of the Wisconsin State Fire Chiefs' Association is to meet at the Elks' Club, Portage, Wis., on September 3 and 4. There are to be demonstrations of several devices for firemen, among them a smoke extractor and an invention whereby one man can raise a 50 or 60-foot ladder. Besides the set addresses, it is planned to hold informal discussions at the close of each session. The program is as follows:

September 3—Morning

8:30—Registration of Chiefs at Elks Club.
9:30—Convention called to order by President Peter Steinkellner. Opening Prayer by Rev. Adam Fawcett. Welcome by Hon. Henry H. Niemeyer, Mayor of Portage, Wis. Response by Chief George McGillan of Appleton, Wis. Appointment of Committees.
11:00—Memorial Services.

September 3—Afternoon

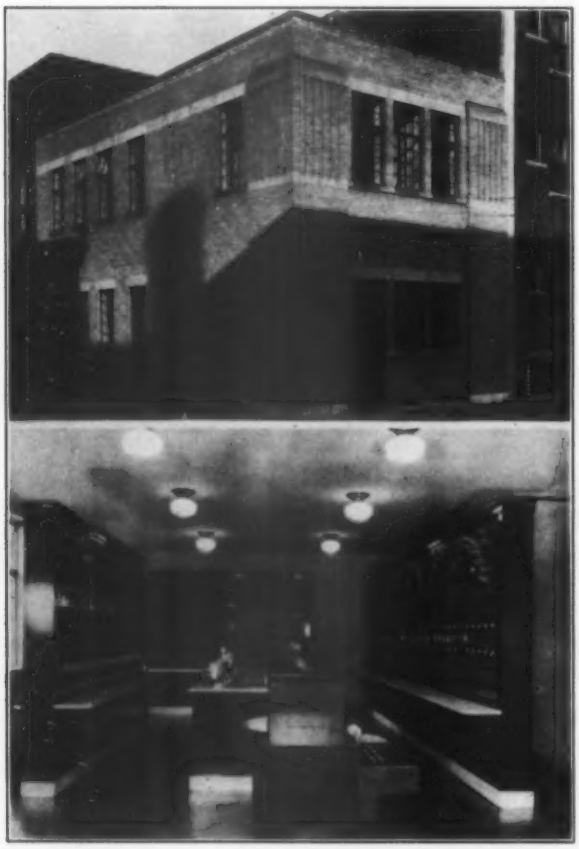
1:00—Meeting called to order. Opening Remarks by President Steinkellner. Address: "Needs of Wisconsin Chiefs Through Legislation and Otherwise," by J. E. Florin, Supt. Fire Prevention Bureau, Madison, Wis. Address: "Dust Explosions," by David J. Price, Engineer in Charge Chemical Bureau, U. S. Dept. of Agriculture, Washington, D. C. Address: "Compensation As It Affects Paid and Volunteer Firemen," by Fred M. Wilcox, Chairman Industrial Commission, Madison, Wis. Discussion.
5:00—Sight-seeing Tour of Portage.
6:30—Annual Banquet and Entertainment at Elks Club, R. E. Seaton, Toastmaster.

September 4—Morning

9:00—Meeting called to order. Reports of Committees: Credentials; Auditing; Resolutions; Standardization; Drills and Training; Fire Prevention and Education; Legislation. Address: "The Fire Chiefs Relation to the Public," Frank R. Daniels, Chief Engineer, Wisconsin Inspection Bureau, Madison, Wis. Discussion. Unfinished Business. Selection of Next Meeting Place. Election of Officers. Appointment of Committees. New Business.

September 4—Afternoon

1:00—Motion Pictures (talkies) at Portage Theatre. Salvage, Drills, Training and Inspection Work. Demonstration of Apparatus and Equipment.



Fire Alarm Headquarters Opened in Hamilton, Ont.

A new Gamewell fire alarm system has been installed in Hamilton, Ont., Canada. The upper photograph shows the exterior of the fire alarm headquarters and the lower the interior view of the office. The equipment installed includes three 10-circuit storage battery switchboards, three 5-circuit main line operating boards, one 5-circuit primary operating board, one 5-circuit secondary operating board, one 40-circuit protector board, one operator's unit consisting of transmitters, keys, etc., one box line recording set, one self winding master clock, one low current alarm unit and 560 cells FIP battery.

Poughkeepsie Holds Zone Fire School

A six weeks' course in evolutions and lectures has been completed for this year at the Poughkeepsie, N. Y., Fire Department Training School, sponsored by the New York State Conference of Mayors and the New York State Association of Fire Chiefs. The school is held every year in the apparatus building, housing Engine Co. No. 7. There is a five story drill tower attached to this building, with considerable modern equipment to enable the instructors to give a very practical course. There are also class rooms provided in which the various lectures are given.

The work consists of twenty-one evolutions of standard character and twelve lectures, under the able leadership of Chief Chris. W. Noll, Capt. Otto Dietz, Wm. Shelly and Fred Weber, all of Poughkeepsie Fire Department.

The attendance was very good, considering some of the men had long distances to travel from the various towns. Thirteen Volunteer Fire Companies from Duchess and Ulster Counties, as well as the Paid and Volunteer firemen of the city of Poughkeepsie responded, the groups representing several hundred men.

At the close of the school contests were held between the various departments and silver loving cups were awarded the winners. A banquet was held after the contests, at the Nelson House, and a certificate of attendance was given every man who had completed the course.

Out of town companies were from Arlington, Beacon, Brewster, Carmel, Fishkill, Glenham, Hyde Park, Hope Farm (Verbank), Marlboro, New Paltz, Red Hook, Rhinebeck, and Vassar College. Much credit is due to the instructors of the school for the able work performed especially as they receive no compensation for their lebors.

Virginia Firemen Hold Conventions

The 44th annual convention of the Virginia State Firemen's Association and the 31st annual convention of the Cumberland Valley Volunteer Firemen's Association were held jointly at Winchester, Va., on August 11 to 14. On Tuesday, August 11 the officers and Executive Committees of the two associations met to complete final arrangements for the conventions and to transact their official business.

Wednesday was given over to registration and business sessions. A memorial service was held at the Louden Street Presbyterian Church at 11 a. m., and a torchlight parade of local firemen in the evening. Among the addresses at the business session of the state association was one by L. E. Lookabill, Statistician, in which he gave some interesting statistics of fires and fire losses, and cited some instances of fires caused by carelessness.

Thursday was devoted to sports, athletic and firemanic contests. There was a block dance in the evening.

On the final day, Friday, there was a parade of all of the fire departments and companies of the convention at 2 p. m., and a band contest at 4 p. m.

Changes in American-LaFrance Personnel

The American-LaFrance and Foamite Corporation, Elmira, N. Y., announces the resignation of A. O. Boniface, Assistant to the Vice-President and C. P. Smith, Manager of Industrial Fire Equipment Sales.

N. F. Kimball, who was formerly Advertising Manager, has been appointed as assistant to F. R. Van Rensselaer, Vice-President in charge of Sales.

E. E. O'Neill, formerly Cleveland District Manager, has been placed in charge of Industrial Sales. He will be succeeded at Cleveland by J. O. Binford.

East Orange May Have New Headquarters—An ordinance has been approved in East Orange, N. J., for the erection of new fire headquarters on the site of the present building and on adjoining land owned by the city. The ordinance carries an appropriation of $160,000 for the work. Chief Charles A. McGinly hoped that the construction would be started in September.

The Round Table

(*Continued from page* 648)

us and we have had quite a bit of experience along this line. I also think it is a good idea for the Fire Department to service private extinguishers.

Chas. E. Tovee, Chief, Chico, Cal.: There should be at least one acid and soda, one foam, one Pyrene and one Fire Dust extinguisher on each pumper.

For improving the effectiveness of portable pumps, sulphuric C. P. should be used instead of common C. P. as it does not evaporate as readily. Constant inspection and tagging showing date or recharging should be exercised. The right type of extinguisher should be used at each fire. For example, the foam should be used on an oil fire. Fire Dust on small open gasoline fires such as in a bucket or any open container holding as much as twenty-five gallons.

For years we have made it a practice to charge extinguishers at cost for all theatres, public buildings, schools, restaurants, homes, etc. We also call for and deliver the extinguishers. This gives our men a chance to know the location and also to give advice to the owners on their use.

Edmund B. Lewis, Chief, Scranton, Pa.: There should be at least one soda and acid, and one foam extinguishers on each pumper.

It has been my experience that many persons will take advantage of the opportunity to have the extinguishers filled at the city's expense when they can well afford it themselves. We therefore do not make it a practice to charge extinguishers.

A. B. Horney, Chief, High Point, N. C.: The type of extinguishers to be carried on pumpers depends on whether the machine is fitted with a booster or not. If fitted with the booster tank, one soda and acid, one foam and one Pyrene extinguisher should be carried. If the pumper is not fitted with a booster tank, I would double the soda-acid and foam extinguishers, in addition to a 40-gallon soda-acid machine.

I have no suggestion to make for improving the present type of extinguishers.

We service small extinguishers for homes and manufacturing plants at a nominal cost. I think this work should be done by the Fire Department.

Henry C. Hansen, Chief, Rhinelander, Wis.: Two soda acid, one foam type and one 2½-gallon type extinguishers should be carried on the pumper.

For improving the effectiveness of portable extinguishers they should be kept in good repair and refilled at least once a year.

We service all the 2½-gallon type extinguishers in the city that use soda and acid; the others we fill at the owner's expense. We find that by doing this, it has been a great help in preventing fires from spreading beyond control.

C. A. Borum, Chief, Aberdeen, Wash.: The pumper should carry one Pyrene, one CO_2 gas, one foam, and one pump tank. This, of course, is where other apparatus is covering in with the pumper. More would be necessary if this machine is covering the fire alone.

Members should be instructed in the proper use of the extinguisher and the type of fire it is best suited for.

If an extinguisher is of the chemical type, it should be recharged by the Fire Department to assure its being done properly. We recharge quite a few privately owned extinguishers.

M. T. Kennedy, Chief, West Orange, N. J.: At least four different kinds of extinguishers should be carried on a pumper. One soda acid, one foam, one carbon tetrachloride and one of the CO_2 type. They have their own special extinguishing powers. As portable extinguishers must be classed as first aid in all municipalities where there is an adequate water supply and hydrants are advantageously located, the above number and kinds of extinguishers should be sufficient.

I would suggest that a swivel connection be placed at the tank end of the hose on a portable extinguisher to improve its effectiveness.

Where small fire extinguishers are used by the house owner, I believe the local Fire Department should charge them, if they are used on fires.

Where contents of an extinguisher have become aged or spoiled, the house owner should supply the necessary charges and the local Fire Department should do the recharging. This is the practice in our department.

E. E. Chase, Chief, Lynn., Mass.: Two soda and acid extinguishers should be carried on pumpers and the same amount on the ladder truck.

Portable extinguishers should be kept clean and inspected regularly.

Small size extinguishers used in homes should be charged by the department at the cost of reloading.

Gus Tessmer, Chief, Pittsburg, Kan.: Two 5-gallon pump tanks should be carried on each truck. I believe the service you give the extinguishers determines their effectiveness. We think that the Fire Department should render service to householders using small extinguishers at least once a year and keep them in order at all times.

S. J. Flores, Chief, Shreveport, La.: Two 3-gallon extinguishers should be furnished and carried on each pumper. I believe that the Fire Department should service small size extinguishers used in homes.

L. J. Cameron, Chief, Scottsbluff, Neb.: Two extinguishers on a pumper and four on a ladder truck should be in service at all times. I believe the Fire Department should service small extinguishers used by householders. We have had very good results by doing so. We charge a nominal rate for the service.

Harry E. Colby, Chief, Franklin, N. H.: From two to four extinguishers should be carried on the pumper and ladder truck. We service extinguishers used by small homes, and good results have been noted.

Protective Nozzle of Water Shield Type

A new protective fire nozzle of the water shield type has been invented by George F. Lum, of Detroit, Mich., and is illustrated herewith. It is intended to protect firemen from smoke and flame, by providing a water curtain between them and the fire. At the same time the curtain does not interfere with the main effective stream discharged from the tip of the nozzle.

New Protective Fire Nozzle

There is a rotating valve, which directs the spray, and there are removable discs, made at different angles, radius and curves, which change the diameter and direction of the water curtain. By means of the removable discs the water may be trained backward so as to play upon the fireman holding the nozzle, thus protecting him from intense heat and flame. This it is claimed, enables a fireman to work from a ladder at the window of a smoke-filled building, giving him a water curtain covering the entire window, thus making his work more efficient with the main stream of the nozzle. The curtain also protects the fireman in case of a sudden burst of flame from the window.

The nozzle, it is said, can also be used on fire boats and water towers, enabling them to go close to the fire, being protected by the water curtain from heat and smoke.

Brookline, Mass., Gets New Pumper—Chief Selden R. Allen has just secured an appropriation for the purchase of an American-LaFrance 1,000-gal. pumper. This was the direct result of the exhibit at the New England Convention, as sevral of the officials of Brookline had opportunity to inspect the new apparatus in the exhibit hall at Boston.

Governmental Duties of Fire Officials

(*Continued from page 644*)

a city enacted an ordinance restricting drilling of oil wells in certain localities within the city.

Certain property owners filed suit to enjoin the city from enforcing the zoning ordinance by the terms of which oil well drilling operations were declared illegal in the locality in which they owned property.

It was contended by the property owners that the passage of the ordinance was an attempted exercise of police power which was so unreasonable and arbitrary an exercise of that power that the ordinance should be declared void by the Court as an infringement upon the constitutional rights of the property owners, in that their property was taken from them without due process of law.

Notwithstanding this contention the higher Court upheld the validity of the ordinance, and said:

"The question for our consideration, then, is whether or not the reasonableness of the ordinance in question is fairly debatable. First, we will consider the matter with reference to the question of fire hazard. . . . It is a matter of common knowledge that in some cases oil wells, particularly in new territory, have gotten beyond control and resulted in disastrous fire. Such a well in the heart of a great city would be an intolerable nuisance, and it is conceded could be prohibited by the City Council in the exercise of its police power. In an outlying and relatively unsettled district it is obvious that the fire hazard would be much less, if not entirely negligible. The City Council presumptively acted upon the theory that such a hazard was real and substantial. . . . The uniform rule is that persons seeking to avoid the effect of an ordinance because it is unreasonable must show that it is unreasonable as to them, and cannot predicate their claims upon the fact that the ordinance may be unreasonable as to others."

Municipality Not Liable for Injuries

The same rule of the law, with respect to governmental functions when regulating construction of buildings, is applicable under circumstances where a citizen is injured as a result of negligence on the part of municipal firemen.

In fact all Courts in the United States recognize the established law that municipal corporations are invested with two kinds of special powers and charged with two kinds of duties. The one kind is private, that is to say, merely municipal and for special local purposes and benefits. The other is of a political or governmental character for the general public welfare.

The maintenance of a Fire Department is in the nature of a general public duty as contradistinguished from those duties purely municipal and local, and the employes thereof are not mere agents or servants of the municipality, but they are officers charged with a public service. In other words, the maintenance of a municipal Fire Department is a governmental function, and various Courts have held that when a municipal corporation acts strictly within its governmental character, for the general public welfare, it is not liable for the negligent acts of its employes. The latest higher Court case involving this phase of the law is Hooper vs. City of Childress, 34 S. W. (2d) 907.

The facts of this case are that a municipal fire truck, while being driven over city streets, collided with another vehicle resulting in the death of one of its occupants. The dependents of the deceased sued the city for damages. The counsel for the city contended that the city was not liable because the driver of the fire apparatus was a fireman employed in the Fire Department of the city and hence engaged in governmental functions.

The counsel for the dependents argued that the driver of the fire truck was permitted at all times for a year or more, before the catastrophe occurred, to drive the truck about the city for his own pleasure and convenience, and that the city officials were informed that he was a reckless, careless and negligent driver.

Therefore, the question submitted to the Court was: Was the fire truck driver engaged in performing a governmental function and was the city liable for his negligence by reason of its officers knowing that he was a careless, negligent and reckless driver

In holding the city not liable, the higher Court explained important features of the law, related to this phase of liability, as follows:

"The officers of the Fire Department, and the like of a city, whether operating under general law or by special charter, are not the agents or servants of the corporation appointing them, but of the general public. . . . It follows, then, that the city would not be liable, though its Council may have knowingly selected an incompetent driver."

Also, in another leading higher Court case, Blankenship vs. City of Sherman, 33 Tex. Civ. App. 507, it was shown that a City Council authorized the municipal Fire Department to take part in a parade. During the procession of the parade a pedestrian was seriously injured as a result of negligence on the part of the driver of fire apparatus. The injured pedestrian sued the city for damages on the contention that, although a city is not liable for negligence of its employes who are performing governmental duties, yet in this instance the driver of the fire apparatus was not engaged in the performance of his regular duties which, under the circumstances, should render the city liable.

However, it is important to know that the higher Court held the city not liable, and said:

"Before the City Council would be authorized to order the Fire Department to take part in a parade, it should appear that express authority was conferred by the charter in this respect. Such authority is not contained in the charter of the city. But if we were to concede that the Council had authority, under the general provisions of the charter, to order the Fire Department to take part in the parade to promote trade and commerce and to advertise the city, the plaintiff would still be precluded from recovery, for it is well settled that a municipal corporation is not liable for the negligence of firemen while engaged in the line of their duty."

Also, in Leckliter vs. City of Des Moines, 233 N. W. 58, a citizen was seriously injured when his automobile was run into by a patrol as a result of negligence on the part of the municipal driver. He sued to recover damages, but the higher Court held the city not liable, saying:

"The defendant city is merely an arm of the sovereign state, and in the exercise of its governmental functions its agents and servants through negligence, either of omission or commission, do not cast upon the municipality a civil liability unless the same is imposed by statute. . . . In its governmental or public character the corporation is made, by the state, one of its instruments, or the local depository of certain limited and prescribed political powers, to be exercised for the public good on behalf of the state rather than for itself."

Maryland to Hold Short Course

The annual Maryland Short Course for Volunteer Firemen is to be held in the auditorium of the agricultural building, the University of Maryland, College Park, on September 2 to 4. The course will open at 10 a. m. (standard time) on Wednesday, September 2. There will be a trip to the Baltimore Fire School on Thursday. The program is as follows:

Wednesday, September 2

10:00 a.m.—Address of Welcome, President R. A. Pearson, University of Maryland.
10:15 a.m.—Course opened by Dr. A. N. Johnson, Dean, College of Engineering.
10:20 a.m.—Short Courses for Volunteer Firemen, W. R. Hough, General Chairman of the Baltimore Safety Council.
10:35 a.m.—Volunteer Fire Departments in Rural Communities, Sherwood Brockwell, Fire Marshal of North Carolina.
12:30 p.m.—Luncheon in University Dining Hall.
1:30 p.m.—Demonstration of Salvage Methods, Edward H. Warr, Chief, Baltimore Fire Insurance Salvage Cops, with corps of assistants.
4:00 p.m.—Inspection of college buildings.
5:30 p.m.—Supper.
7:00 p.m.—Moving picture demonstration of Salvage Methods by Chief Warr, followed by informal gathering. Refreshments.

Thursday, September 3

7:00 a.m.—Breakfast.
8:00 a.m.—Busses leave in front of college dormintory for Baltimore. Fire Department School of Instruction demonstration conducted by Howard Travers, Deputy Chief, Baltimore Fire Department.
4:00 p.m.—Busses leave Baltimore for College Park.
6:00 p.m.—Supper at College Park.
7:00 p.m.—Informal discussion of inspection trip, led by Sherwood Brockwell, Fire Marshal of North Carolina.
7:45 p.m.—Moving pictures on Fire Prevention and Fire Inspection by Mr. Fleming of the National Board of Fire Underwriters.

Friday, September 4

7:30 a.m.—Breakfast.
9:00 a.m.—Fire Prevention Methods in Suburban Areas by Calvin G. Lauber, Fire Marshal, District of Columbia. Followed by discussion.
10:30 a.m.—Care and Operation of Mechanical Equipment by O. E. Fearn, Superintendent of Machinery, District of Columbia Fire Department. Followed by discussion.
12:30 p.m.—Luncheon.
1:30 p.m.—General Discussion led by Sherwood Brockwell.
3:00 p.m.—Awarding of certificates.
4:30 p.m.—Final adjournment.
5:30 p.m.—Supper for those desiring to remain.

Dallas to Start Work on Drill Tower—Chief Gambrell, of Dallas, Tex., has stated that work will start soon on a drill tower for the Fire Department.

NEW YORK CITY ADOPTS MODEL MOTION PICTURE FILM LAW

New Ordinance Result of Conference by Best Minds in Fire Department, Underwriters and the Motion Picture Industry—Text of Law

By WM. JEROME DALY

(Continued from last issue)

FOLLOWING is the third installment reproducing the text of the New York City ordinance intended to "put teeth" into the laws relative to inflammable motion picture film. The new law represents the composite thought of the "best minds" in the fire fighting service, the insurance underwriters, the fire prevention field and the motion picture representatives themselves. It is the culmination of eighteen months of sincere, earnest, painstaking and technical efforts to get the safest regulations possible for both the industry and the public.

The title of the new law is as follows:

AN ORDINANCE to amend chapter 10 of the Code of Ordinances by adding a new article 20, in relation to inflammable motion picture film, and repealing the present article 20 of chapter 10, and subdivision 23 of section 1 of article 1 of chapter 10, relating to the same subject.

Be it Ordained, by the Board of Aldermen of The City of New York, as follows:

Section 1. Article 20 of chapter 10 of the Code of Ordinances is hereby repealed and a new article 20 is inserted in place thereof to read as follows:

Article 20

Sections 240 to 242 and part of Section 243 have already been published. Following is the continuation of Section 243:

§243. General provisions applying to all buildings.

(e) Unless the building is designed to safely sustain the load resulting from the vault being filled with water, the vault shall be provided with suitable drains or scuppers to the outside of the building.

(f) Proximity to stacks and other sources of heat must be avoided.

(g) Door openings shall be protected with two fire doors; one on each face of the wall. The interior door shall be automatic and the outer door shall be of swinging type and close into a rabbet or otherwise made tight to prevent the passage of flame around the edges. The outer door shall be self-closing and if fastened open shall be arranged to close automatically in case of fire originating in or out of vault.

(h) Each vault shall be provided with an independent vent having a minimum effective sectional area of 14 square inches per 100 pounds of film capacity. The vent area for a vault of 750 cubic feet shall be 1,400 square inches.

(i) Vent flues inside the building shall be constructed of 5 inches of reinforced concrete or of a construction equivalent to that required for smoke chimneys. The outlet of each vent shall be above roof or made to face street, court or other clear opening, giving a distance of at least 50 feet to any window or other opening exposed thereby and not in the same plane and giving a distance of at least 25 feet to any fire-escape on the same or higher level.

(j) Each vent shall be protected against the weather by single thickness glass one-sixteenth of an inch thick, painted a dark color, in a sash arranged to open automatically in case of fire by the means of an approved releasing device placed inside the vault. The area of the glass shall be the effective sectional area of the vent opening. No pane of glass shall be smaller than 200 square inches. Any protection equivalent to that specified in this paragraph may be accepted in lieu thereof.

(k) A light wire screen not coarser than one-eighth-inch mesh shall be placed over each vent. Bars or screen designed to prevent burglary or injury to contents, shall not have a mesh of less than 4 inches and shall give a net opening equal to that called for under vent. Bars and screens shall be so arranged as not to interfere with the automatic operation of the sash.

(l) Film vaults shall not be provided with skylights or glass windows other than as specified under vents.

(m) Racks in film vaults shall be of metal or other incombustible material. Vertical incombustible partitions equivalent in durability and heat insulation to three-eighths inch hard asbestos and extending from floor to the ceiling shall be provided to divide racks into sections such that the amount of film protected by each sprinkler shall not exceed 830 pounds. Racks shall not obstruct vent openings.

(n) Vaults shall be protected with automatic sprinklers, with a ratio of one head to each 62.5 cubic feet of total vault space. A vault of 750 cubic feet shall have twelve sprinkler heads. Sprinkler heads shall be arranged to give uniform distribution within the sections formed by the above-mentioned partitions. They shall be separated by sheet-metal baffles extending below the sprinkler head.

(o) All lights shall be at the ceiling and of the fixed marine type with vapor-proof globes and conduit wiring. All switches shall be outside the vault.

(p) Heating when required to prevent sprinkler pipes freezing shall be by hot water or low pressure steam with automatic control limiting the vault temperature to not in excess of 70 degrees Fahrenheit. Radiators shall be placed at the ceiling, over aisle space, with pipes and radiators protected with wire guards so arranged that no film can be placed within twelve inches of such pipes or radiators.

(q) Materials other than film and film cement shall not be stored in the film vault.

15. Cabinets. (a) Cabinets shall be of a construction approved by the fire commissioner and shall not have a capacity in excess of 75 standard reels or 375 pounds of film.

(b) Cabinets may be constructed of one-quarter inch asbestos board on a framework of one and one-quarter by one and one-quarter by one-eighth inch angles or may be made of 18 U. S. gauge metal double walled with one and one-half inch air space.

(c) Racks in the cabinet shall be of metal so arranged that containers can be stored on edge.

(d) Doors shall be so arranged as to remain normally closed and provided with catches at three points.

(e) Cabinets having a capacity of over 10 reels or 50 pounds of film shall be provided with a vent to the outside of the building. The vent shall have a minimum effective sectional area of 14 square inches per 100 pounds of film capacity.

(f) Vent flues inside the building shall be of a construction equivalent to 18 U. S. gauge metal, covered with one inch of heat insulating material.

(g) Each cabinet holding over 10 standard reels or 50 pounds of film shall be provided with at least one automatic sprinkler; provided, however, that a cabinet constructed so that each reel is in a separate compartment and will burn out without communicating fire to film in an adjoining compartment, need not be provided with an automatic sprinkler.

§244. Special provisions applicable to theatres, motion picture theatres, screening or projection rooms.

1. In theatres and motion picture theatres, screening or projection rooms, film shall be stored kept and handled only in projection booths, rewinding rooms and/or in special storage rooms provided for such purposes. The total quantity so stored, kept or handled at any one time shall not exceed 50,000 feet. All film not in projection machines or subject to inspection, or in the process of rewinding, shall be kept in approved containers. The quantities of film stored, kept or handled in the respective rooms shall not exceed those specified in the following sub-paragraphs:

(a) In a special storage room, not exceeding 25,000 feet;

(b) In a projection booth or room constructed of brick, hollow tile, concrete, or other approved masonry, not exceeding 25,000 feet.

(c) In a rewinding room constructed of brick, hollow tile, concrete, or other approved masonry, separated from projection room with openings thereto protected with approved fire doors, not exceeding 25,000 feet;

(d) In a projection booth constructed of asbestos board or similar approved material permitted for use in theatres or motion picture theatres, not exceeding 15,000 feet in existing building and an additional 10,000 feet may be kept in rewinding room constructed of asbestos board or similar approved material permitted for use in a theatre or motion picture theatre, provided the projection room and rewinding room are separated by a self-closing fire-proof door.

(To be continued)

Asheville, N. C., Plans New Regulations—Asheville, N. C., is considering new regulations for the examination of applicants for the Fire Department. It establishes a system of merits and demerits. Applicants are required to be between the ages of 21 and 32 years and must prove a one year's residence.

Fort Bragg Has Progressive Department

The Fire Department of Fort Bragg, Cal., was organized forty years ago and the equipment consisted of five hand hose carts stationed in different parts of the city in small houses. The alarm system was a bell on the central fire station and a steam siren on the mill. In addition, there were a number of 2½-gallon extinguishers placed in small boxes mounted on electric light poles at strategic points. The extinguishers were charged yearly.

Chief Robert C. Howe,
Fort Bragg, Cal.

The community has two water systems—one from the mill pond from which the water is pumped at the mill, and the other water from the city reservoir.

At present the department has a combination double 35-gallon chemical and hose wagon and a 400-gallon pumper. It also has an H & H inhalator, an All Service gas mask and two Shreck safety belts.

Chief Robert C. Howe states that the department is now trying to obtain a modern fire alarm system, a small ladder truck and a small pump.

The photograph was taken shortly after the men were provided with their first complete uniform. Not all of the men are present, as some were away when the picture was taken.

Firemen and Apparatus of Fort Bragg, Cal.

Illinois Firemen Have Full Program

The forty-fourth annual convention of the Illinois Firemen's Association, which meets at Murphysboro, Ill., on September 8 to 10, is to make its headquarters at the Hotel Logan. The meetings will be held at the Fox Hippodrome Theatre and the exhibits are to be held at the American Legion Hall. The program announces events for the ladies on the morning, afternoon and evening of Tuesday and Wednesday and on the morning of Thursday, including auto rides, shopping tour, a moving picture show, miniature golf, receptions and dances. There is to be a banquet on Wednesday evening. Following are the principal features of the program:

Tuesday, September 8, 10 a. m.

Convention called to order by President Fred. P. Haderlein, Carlyle, Ill. Invocation: Rev. Father Taggert, St. Andrew's Church. Address of Welcome: Hon. Dr. I. W. Ellis, Mayor of Murphysboro. Response: President Fred P. Haderlein. Response by Delegates. Appointment of Committees. Payment of dues to Secretary Roy W. Alsip.

Afternoon Session

"Arson and Arson Investigations," S. L. Legreid, Fire Marshal, Springfield. "The Training and Discipline of Volunteer Firemen," G. R. Hagman, Captain Engine Co. No. 2, Rockford. "What Progress Have We Made in Fire Prevention," John G. Gamber, Evanston. "Modern Firemanship," Chief J. W. Just, Illinois Inspection Bureau, Chicago. Luncheon and Smoker, Tuesday, 9:30 p. m.

Memorial Services, First Methodist Episcopal Church, beginning at 7:30 p. m. Invocation: Rev. William F. Esser, Pastor St. Peter's Evangelical Church. Address: Chief Fred P. Haderlein, President of the Illinois Firemen's Association. Roll Call of Deceased Members: Assistant Chief Roy W. Alsip, Secretary of the Illinois Firemen's Association. Benediction: Rev. Frank E. Harris, Pastor of the First M. E. Church.

Wednesday, September 9, 9 a. m.

Business session and reports of Committees. "Gas Masks," James Whicher, Instructor, St. Louis Fire Department Training School. "Legal Problems As Affecting the Fireman," Simon Kellerman III, City Attorney, Edwardsville. "Legislation and Organization Works," Chief Peter Steinkellner, Chief Engineer, Milwaukee Fire Department and President of the Great Lakes Division of the International Association of Fire Chiefs. "Salvage Work," Chief Frank C. McAuliffe, Chief of Patrols, Chicago.

Afternoon Session

Visit to Exhibit Hall—American Legion Hall.
Grand Ball (Danceland), 9 p. m.
6.30 p. m.—Banquet at the Centenary Church, 14th and South Streets. Toastmaster: Hon. James Rockwell.

Thursday, September 10, 9 a. m.

"Inspection of Department Stores," Thos. E. Ryan, Chief 11th Battalion, Chicago. "Automatic Sprinklers," R. E. Freeman, Engineer, Illinois Inspection Bureau, Chicago. "Fighting Country Calls on a Business Basis," Glen Craft, Secretary, Grays Lake Fire Department.

Afternoon Session

Reports of Committees. Election of Officers. Selection of 1932 Convention City.

Arkansas to Hold Second Fire College

The Arkansas State Firemen's Association is to hold the second Fire College at the Marion Hotel, Little Rock, Ark., on September 14 to 16, in connection with the tenth annual convention of the association. All sessions of the convention and school will be held at the hotel except the afternoon of September 16, when all the demonstration, displays, etc., will take place at the drill tower in the rear of the Little Rock central fire station. It is anticipated that there will be an attendance of over three hundred, as the response to the convention call, according to Secretary H. D. Compton, has been greater than expected.

The tentative program is as follows:

Monday, a.m., September 14

Registration; Opening session; Appointing of committees.

Monday, 1:30 p.m.

First session of school of instruction. Three groups, two squads each. Six lectures as follows:
1. Ventilation—Chief W. J. Springer, Texarkana, Ark.
2. Auxiliary Fire Fighting Equipment—Geo. Suter, Ark. Fire Prev. Bureau.
3. Forcible Entry—Asst. Chief. W. P. Dean, Fort Smith, Ark.
4. Care of Fire Hose—Capt. T. G. Sandusky, L. R. Arkansas.
5. Exposures—Chief Ballew, Springdale, Ark.
6. Building Inspection—Inspector H. D. Compton, L. R. Arkansas.

Monday night, various entertainments.

Tuesday, 9 a.m.

Second session of school of instruction, groups move forward.
10:45 a.m. Moving picture "Salvage Operations."

Tuesday, 1:30 p.m.

Business session of the Arkansas State Firemen's Assn.

Tuesday, 7:30 p.m.

Banquet at Marion Hotel. Competitive drills by auxiliary drill teams.

Wednesday, 9 a.m.

Third session of school of instruction, final group movement. 10:45 a.m., fire drill at Little Rock high school.

Wednesday, 1:30 p.m.

Drill demonstration, Bell Telephone Company's life saving team, central fire station.
Electrical demonstration, effects of proper and improper electric wiring, Arkansas Power & Light Co.
Pumping demonstrations and drill tower work by members of Little Rock Fire Department on drill tower rear central fire station.

Vinton, Ia., May Have Rural Protection—Pledges are being obtained from the farmers within a seven miles radius of Vinton, Ia., for the purchase of a pumper that will cost $6,200. The farmers are only asked to pay $2,500 of this amount.

—and they saved a town with INDIAN FIRE PUMPS

(Patented)

WITH a strong north wind whipping the fire in the surrounding forests into a blazing fury, men and boys of Brentwood, Long Island, went into action with 40 INDIAN FIRE PUMPS *and saved the town.*

Fire Warden Wm. H. Baker, who directed the operations on a two mile front, claims INDIANS are the *greatest fire pumps he ever used.* Write for folder describing his and other users experience with these strong, highly efficient extinguishers.

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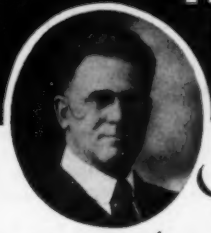

W. J. Tomerlin
Chief, Springfield
Fire Dept.,
Springfield, Tenn.

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"I am thoroughly sold on salvage work by the fire department . . . the first Shuredry Covers I purchased from you more than paid for themselves the very first day after receiving them, and have saved thousands of dollars worth of valuable merchandise and household goods since that time."

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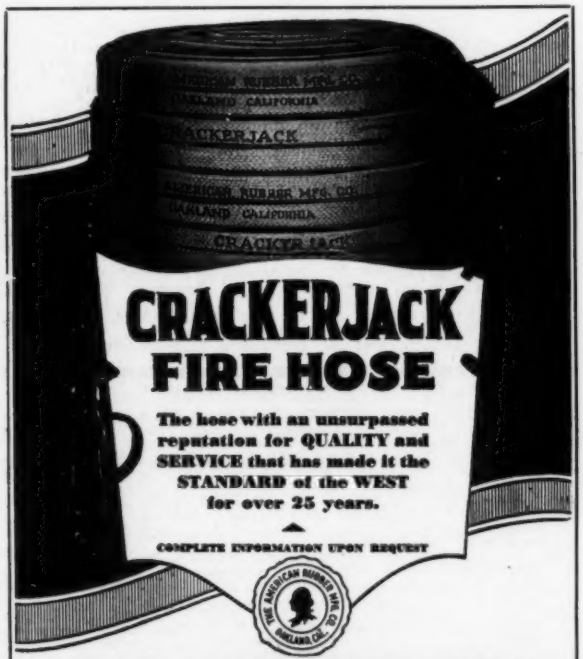

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Utica, New York 109 Harter Place
Baltimore, Md., 407 Munsey Bldg.

PROPOSED IMPROVEMENTS

Great Neck, N. Y.—The purchase of an ambulance for fire department is being urged. Herbert Ninesling, Chief of Fire Dept.

Mason City, Iowa—National Board of Fire Underwriters recommended placing of additional fire hydrants in sections of city not properly protected; installation of a third engine company, equipped with motor pumper of 750 gal. capacity and a chemical or water tank, in vicinity of Federal Ave. and 14th St. N.; and installation of a fire alarm telegraph system. Daniel H. Shire, Chief of Fire Dept.

Rock Hall, Md.—Funds raised by Rock Hall Volunteer Fire Department for purchase of additional equipment, Herbert A. Urie, Pres.

Santa Cruz, Calif—Fire Chief Robert Tait recommended purchase of a 500 gal. pumper in his annual report.

Mt. Airy, Md.—At meeting of Board of Managers of local volunteer fire company the purchase of new fire truck was recommended. Herman S. Beck, Chief.

Syracuse, N. Y.—Reports state Supt. Bureau of Fire Alarm agitating for purchase of new equipment.

Urbana, Ohio—City to vote on special levy for purchase of new apparatus for fire department at the coming November election.

Position Wanted

Officer in fire dept., age 36 years, 15 years' experience, 6 years' activities in fire prevention and protection in city of 40,000 population. Wants position as Chief of small department, any locality, prefers west. Best references. Address: Box 415, FIRE ENGINEERING, 24 W. 40th St., N. Y. C.
9-2

Position Wanted

Young married man having years of experience on American-La France fire engines desires position as department mechanic. Address: Box 410, c/o FIRE ENGINEERING, 24 West 40th St., New York City.
9-2

CONVENTION DATES

Sept. 1-3—KENTUCKY FIREMEN'S ASSOCIATION. 12th Annual Convention, Louisville, Ky. Secretary, Captain S. G. Render, Fire Department, Louisville, Ky.

Sept. 2-4—MARYLAND SHORT COURSE FOR VOLUNTEER FIREMEN. Short Course, Auditorium, Agricultural Bldg., University of Maryland, College Park, Md. Director, Dr. A. N. Johnson, Dean Engineering College, the University.

Sept. 3-4—WISCONSIN STATE FIRE CHIEFS' ASSOCIATION. 2nd Annual Convention, Portage, Wis. Secretary, Chief A. J. Rahn, Two Rivers, Wis.

Sept. 4-8—PACIFIC COAST ASSOCIATION OF FIRE CHIEFS. 38th Annual Convention, U. S. Grant Hotel, San Diego, Cal. Secretary, Jay W. Stevens, 1014 Merchants' Exchange Bldg., San Francisco, Col.

Sept. 7—NATIONAL FIREMEN'S PARADE. 9th Annual Parade, Labor Day, Washington, D. C. Address, Sergt. A. J. Bargagni, Marshal, D. C. Fire Dept. Training School, Washington, D. C.

Sept. 8-10—ILLINOIS FIREMEN'S ASSOCIATION. 44th Annual Convention, Murphysboro, Ill. Secretary, Assistant Chief Roy W. Alsip, Champaign, Ill. Exhibit information, Chief Albert Herring, Murphysboro. Also, 1st Annual Convention, Ladies' Auxiliary of Illinois Firemen's Association. Secretary, Mrs. R. W. Alsip, Champaign.

Sept. 8-9—IOWA FIREMEN'S ASSOCIATION and IOWA FIREMEN'S FUNERAL AID ASSOCIATION, 54th Annual Convention, Audubon, Ia. Secretary, Paul A. Soener, Independence, Ia.

Sept. 14-16—ARKANSAS STATE FIREMEN'S ASSOCIATION. 10th Annual Convention and 2nd Annual Drill School, Marion Hotel, Little Rock, Ark. Secretary, H. D. Compton, Central Fire Station, Little Rock.

Sept. 18-19—NEW JERSEY STATE FIREMEN'S ASSOCIATION. 54th Annual Convention, Atlantic City, N. J. Secretary, William Exall, Room 602, Chamber of Commerce Building, Newark, N. J.

Sept. 18—NEW JERSEY STATE FIRE CHIEFS ASSOCIATION. Annual Meeting, 8 p. m., Atlantic City Auditorium, Atlantic City, N. J. Secretary, Fred A. Trowbridge, 17 South Street, Morristown, N. J.

Sept. 21-23—TENNESSEE FIREMEN'S ASSOCIATION. 1st Annual Convention, Nashville, Tenn. Secretary-Treasurer, Joe J. Martin, Nashville, Tenn.

Sept. 21-24—OHIO FIRE SCHOOL. 2nd Annual Fire School, Ohio State University, Columbus. Address, Chairman Fire School, Harvey Walker, at the University.

Sept. 21-25—NORTHWEST FIRE SCHOOL. 4th Fire School, University of Minnesota, Minneapolis, Minn. Address, Director of School, Room 16, University Library, Minneapolis.

Sept. 22-24—MASSACHUSETTS STATE FIREMEN'S ASSOCIATION. 52nd Annual Convention, Lynn, Mass. (Sessions at New Ocean House, Swampscott.) Secretary, Daniel J. Looney, Room 1043, Old South Bldg., Boston, Mass.

Sept. 23—CENTENNIAL PARADE, PEEKSKILL, N. Y., FIRE DEPARTMENT. 100th Anniversary, Cortlandt Hook & Ladder Co., Parade and Celebration, Peekskill, N. Y. Chairman, Program Committee, Frank I. Jewell, 958 Paulding St., Peekskill.

Sept. 24-26—LOUISIANA STATE FIREMEN'S ASSOCIATION. 26th Annual Meeting, Haynesville, La. A. J. Bethancourt, Secretary, Houma, La. J. C. McEachern, Haynesville, La., Exhibit Information.

Oct. 6-8—FIREMEN'S ASSOCIATION OF THE STATE OF PENNSYLVANIA, 52nd Annual Convention, Wilkes-Barre, Pa. Secretary, Charles E. Clark, 411 Bellevue Ave., Wayne, Pa.

Oct. 14-17—INTERNATIONAL ASSOCIATION OF FIRE CHIEFS. 59th Annual Convention, Plaza Hotel, Havana, Cuba. Meeting Hall, Asturiano Club. Recording Secretary. Chief James J. Mulcahey, Yonkers, N. Y.; Executive Secretary, Jay W. Stevens, 1014 Merchants' Exchange Bldg., San Francisco, Cal.; Chairman, Exhibit Committee, Chief Charles A. McGinley, East Orange, N. J.

Oct. 15—MISSOURI VALLEY ASSOCIATION OF FIRE CHIEFS. Annual Convention, Havana, Cuba, at the same time as I. A. F. C. Secretary, Chief Ray Tiller, Waterloo, Ia.

Oct. 20-22—NEBRASKA STATE VOLUNTEER FIREMEN'S ASSOCIATION. 50th Annual Convention, Norfolk, Neb. Secretary-Treasurer, H. A. Webbert, Kearney, Neb.

Oct. 20-22—RAILWAY FIRE PROTECTION ASSOCIATION. 18th Annual Meeting, Cleveland, Ohio. Secretary-Treasurer, R. R. Hackett, Baltimore & Ohio Railroad, Baltimore, Md.

Oct. 28—FIRE CHIEFS' EMERGENCY PLAN OF WESTCHESTER COUNTY, N. Y. Monthly Meeting, Fire Headquarters, Peekskill, N. Y. Secretary-Treasurer, E. Riviere, Fire Headquarters, Larchmont, N. Y.

May 9-12, 1932—NATIONAL FIRE PROTECTION ASSOCIATION. 36th Annual Meeting, Atlantic City, N. J. Managing Director, Franklin H. Wentworth, 60 Batterymarch St., Boston, Mass.

May 11, 1932—DEL-MAR-VA VOLUNTEER FIREMEN'S ASSOCIATION. 3rd Annual Convention, Cape Charles, Va. Secretary, W. A. Karpa, Cape Charles, Va.

June, 1932—NORTHWESTERN OHIO VOLUNTEER FIREMEN'S ASSOCIATION, 60th Annual Convention, Gibsonburg, Ohio (exact date to be decided later). Secretary, Harry Smith, Supt., Water Works, Port Clinton, Ohio.

June 21-24, 1932—ILLINOIS FIRE COLLEGE, 8th Annual College, University of Illinois, Champaign-Urbana, Ill. Director, Prof. L. H. Province; Secretary, Asst. Chief Roy W. Alsip, Fire Department, Champaign, Ill.

Department and Other Reports Received

Fire Marshal, Indiana—Analytical Survey of Indiana Fire Loss prepared by Alfred Hogston, State Fire Marshal; illustrated, twenty-eight pages and cover.

Hudson Valley Volunteer Firemen's Association—Proceedings of the Forty-first Annual Convention of the Hudson Valley Volunteer Firemen's Association held at Rensselaer, N. Y.; illustrated, 128 pages and cover.

Elizabeth, N. J.—Twenty-ninth annual report of the Board of Fire Commissioners, Elizabeth, N. J.; fifty-seven pages and cover.

Dominion Association of Fire Chiefs—Proceedings of the twenty-second annual convention of the Dominion Association of Fire Chiefs held at Port Arthur, Ont., Canada; illustrated, 221 pages, bound in cloth.

Hamilton, Ont., Canada—Fifty-second annual report of the Chief Engineer of the Fire Department, Hamilton, Ontario, Canada; illustrated, sixteen pages and cover.

Panama City, Panama—Report of the Bureau of Safety, Panama City, Panama, printed both in Spanish and English; thirty-seven pages with tables, and cover.

Denver, Col.—Annual report of the Fire Department, Denver, Col.; illustrated, forty pages and cover.

East Providence Firemen Beneficial Association—Program of the Ninth Concert and Dance, East Providence Firemen Beneficial Association; illustrated, fifty-five pages and cover.

Railway Fire Protection Association—Proceedings of the Seventeenth Annual Meeting of the Railway Fire Protection Association held in St. Louis, Mo., October 21-23, 1930; contains list of members; 163 pages and cover.

Brockton, Mass.—Annual report of the Chief of Fire Department and Superintendent of Fire Alarm, Brockton, Mass.; 103 pages and cover.

Schenectady, N. Y.—Condensed report of the Bureau of Fire, Schenectady, N. Y.; twenty-four pages.

CORRESPONDENCE

Solidified Gasoline

To the Editor:

There appeared in the August 5 issue of FIRE ENGINEERING, on page 579, in "Questions and Answers," a question under the caption of "Fire Proofing Gasoline," and the reply to it. This applied especially to the use of gasoline as fuel for motor boats.

You may be interested to know that there has been a company recently formed in this city which has passed through the experimental stages of solidifying gasoline especially for airplane and motor boat use. The process of solidifying is done through the addition of various chemicals to the gasoline, while it is being boiled, then drawing off the foreign substances, which leaves a liquid, which, on becoming cold, will become solid and may be transported, similar to a cake of ice. However, this solid lump will not melt, neither will it explode. It becomes a slow-burning material, not easily lighted, and is not susceptible to fire like raw gasoline.

It has been thoroughly determined that solid gasoline can be carried in tanks in the wings of an airplane and drawn out under air pressure, and at the present time it is being demonstrated as fuel for motor boats.

We would be very glad to give further information to anyone interested.

THE NEW HAVEN CHAMBER OF COMMERCE,
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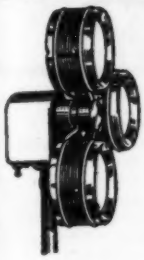

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At night these three revolving red signal lights make identification of the apparatus instantly possible as far as light is visible.

Insist upon having "Roto-Rays" on the next piece of apparatus you buy. It's just as essential as the whistle, the siren or the bell. Easily installed on apparatus now in service.

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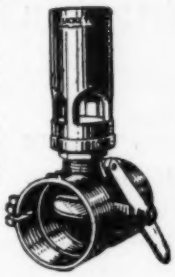

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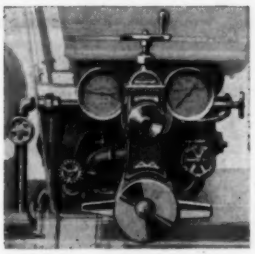

COMPACT CONSTRUCTION

A desirable fire pump is one that is flexible in its operation, effectively handling both high and low pressures, but being built within certain limits of size and weight. Such is the Waterous Pump. Equally capable of handling hard jobs is the Waterous Fire Hydrant. Complete information is yours for the asking.

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(Reg. U. S. Pat. Off.)

FALSE ALARMS

BEFORE THE TIME

A fire inspector was sent to inspect the kitchens of several restaurants, after there had been a run of hot grease fires. In one place he noticed a roller towel. In a friendly sort of way, he said:

"Don't you know roller towels are against the law?"

"Oh yes," said the proprietor, "but that one was put up before the law was passed."

THE MOTIVE

Firemen, in an attempt to increase the Benevolent Fund, were to give a Concert and Dance, and members of the department were detailed to make a house to house canvass to sell tickets. Before going up one walk, a fireman called to the boy in front:

"Is your mother home?"

"Say, you don't suppose I'm mowing this lawn because the grass is long, do you?"

One fellow who is sure that men come from monkeys is the man who sweeps up the peanut shells after the ball game.

"TEMPUS FUGIT"

Mike was a terror when he was "lit up," department regulations or no department regulations. The last time he ran amuck the city laws and he was sent away. A comrade called to console Mike's wife.

"Cheer up, Mrs. Murphy. A month will soon pass."

"Yes, I know, Tom. And there was me thinkin' he'd get at least six."

REVENGE

At the county tournament a prize was offered the company that came the longest distance. So one organization across the state line decided to compete for the prize. On the way the apparatus developed engine trouble when it was miles from a garage, and it had to be towed.

"It's outrageous to think that that guy has the nerve to charge us $15 to be towed that short distance," protested the Assistant Chief.

"That's all right, Chief," replied the driver. "We'll get even with him. I've got the brakes on."

THE REASON

Up at Truck 7 the boys were complaining about the quality of the milk that was left them each day. So the gang spoke to the milkman who kept a small dairy a few miles away.

"I know the milk isn't so good," was his defense. "Our cows haven't been contented since they tore down the tobacco sign with the handsome bull on it."

All the modern girl puts away for a rainy day is her love letters.

WHOOPEE

One day one of the young business men of the town who had quite a reputation in his bachelor days of being a hard drinker, told his recently acquired wife that he would have to go out that night to help elect a new fire chief. The young wife made him promise that he would not touch a drop of anything all evening.

The meeting resulted in the election of a man named Hoops. All evening the young husband steered clear of offered drinks, and filled with righteous pride it occurred to him to phone his wife.

"Hello, dear! It's Jim."

"Oh," answered his wife, "whom did you elect?"

"Hoops, my dear, Hoops," he responded.

"Oh, Jim," said the wife, her voice breaking, "how could you? After all you promised!"

TWO TO ONE

When the traffic officer on the corner came into the Fire House to leave his coat, he was asked about some current happenings.

"What was the cause of the collision at your corner this morning?"

"Oh that," he answered. "Just two motorists after the same pedestrian."

SPECIALIZATION

At a summer resort on a river where there was a small U. S. Naval station, the Rescue Squad was called out to help revive a woman who was suffering from submersion. While the boys were working, another squad member was sent to the Navy depot for a doctor.

When the woman opened her eyes she saw a man in uniform bending over her.

In a dazed way she asked, "Oh, sir, what kind of an officer are you?"

"I'm a naval surgeon," he replied.

"Oh, goodness! How you doctors do specialize."

And of all the books that were taken away by the family for light summer reading, the one that got thumbed the most was dad's check book.

In the old days when the bell rang you got a cigar. Now you get a Fuller brush.

TOO MUCH

The Chief had been in the habit of eating at a certain restaurant.

As the waitress brought him his glass of water she remarked, "There's most everything on the menu today."

"So I see," he replied. "Bring me a clean one so I can read it."

PROHIBITION'S BLESSINGS

It used to be necessary to warn the children when they went out to play to watch out that the dashing Fire Department horses didn't run them down.

Now, mothers have to warn them not to get caught in the crossfire resulting from a local beer mobster's war.

PERFECTLY SAFE

"Did you hear about the girl in the cotton stockings?"

"No, what happened to her?"

"Nothing."

A noted health authority stated the other day that during hot weather babies should wear as few clothes as possible. And there doesn't seem to be any age limit on babies.

The only thing that shuts off any of the radios in the neighborhood is the appearance of an installment collector.

—*Drawing by "Art" Espey*

Second Blue Shirt—"Say, Jack, I've a hunch we're about due for a run!"

YOUR CATALOG PAGE

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1 Acid Siphons.
2 Adaptors for Changing Hydrant Threads.
3 Acid Jars and Rings.
4 Aerial Ladders, Detachable.
5 Aerial Trucks.
6 Alarms, Siren, Electric.
7 Alarm Systems, Industrial.
8 Alarm Systems, Municipal Telegraphic.
9 Alarms, Thermostatic.
10 Asbestos Clothing.
11 Badges, Insignias, Buttons, etc.
12 Banner, Trumpets, etc.
13 Battery Jars.
14 Battery Zincs for Fire Alarm Batteries.
15 Bells, Firm Alarm, Municipal
16 Body Equipments.
17 Boxes, Gongs, Reels, Registers, Fire Alarm.
18 Brakes, Air.
19 Brake Linings.
20 Brooms, Fire.
21 Building Materials, Fire Retardant.
22 Caps, Firemen's.
23 Chains, Non-Skid Fire Apparatus.
24 Chassis for Fire Apparatus.
25 Chemical Engines and Tanks.
26 Chimney Fire Fusees & Compounds
27 City Service Trucks.
28 Coats & Suits, Firemen's Quick Hitch.
29 Combination Chemical & Hose Cars.
30 Cutting & Welding Equipment Blow Torch.
31 Cutting & Welding Equipment, Electric.
32 Deluge Sets.
33 Door Openers, Fire Station, Automatic.
34 Extinguishers, Calcium Chloride.
35 Extinguishers, Carbon Dioxide.
36 Extinguishers, Soda-Acid.
37 Extinguishers, Carbon Tetrachloride.
38 Extinguishers, Foam.
39 Extinguishers, Powder.
40 Fire Boat Nozzle Equipment.
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59 Hose Holders.
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61 Hose Standardization Tools.
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88 Sirens, Apparatus & Chiefs' Cars.
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111 Whistles, Fire Apparatus.
112 Wrecking Trucks.

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Just run down the list of equipment, fill out the coupon below, and mail it to us with the numbers that indicate the equipment in which you are interested.

We will then notify reliable manufacturers of your interest in such equipment and request that without cost to you or any obligation they send you the information you desire.

They will gladly do this and it will be a pleasure for us to help you in this way. No charge whatever!

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As a fire protection official I should like to have descriptive literature and complete information mailed to me, without cost or obligation, on the equipment indicated by the followng numbers:

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Nos. .....
Nos. .....
Nos. .....

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Position .....
Street .....
City and State .....

For Information on Any Equipment Not Listed, Write on This Page or Use Separate Sheet

9-2

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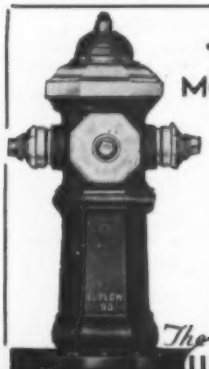

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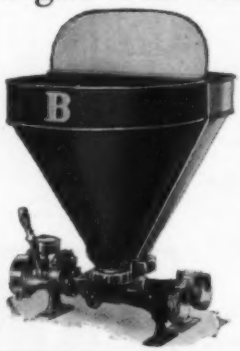

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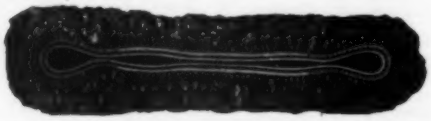

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G

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THE PUBLISHERS.

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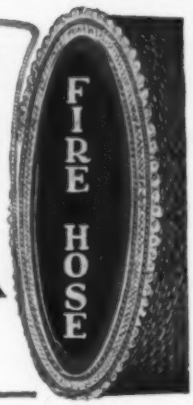

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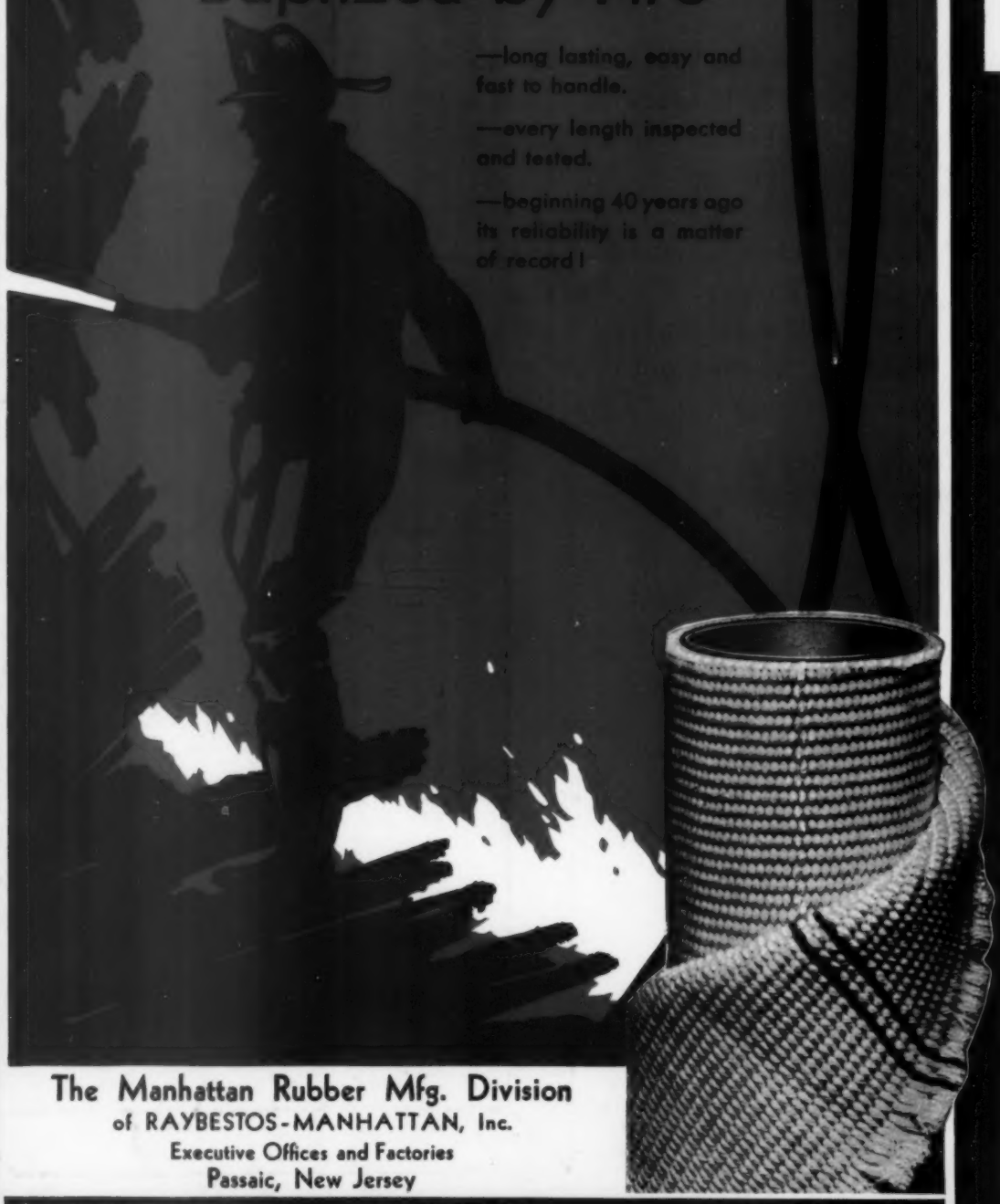

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